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CHAMBERS'S  
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EDITED BY

WILLIAM AND ROBERT CHAMBERS.

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INFANT EDUCATION

FROM TWO TO SIX YEARS.

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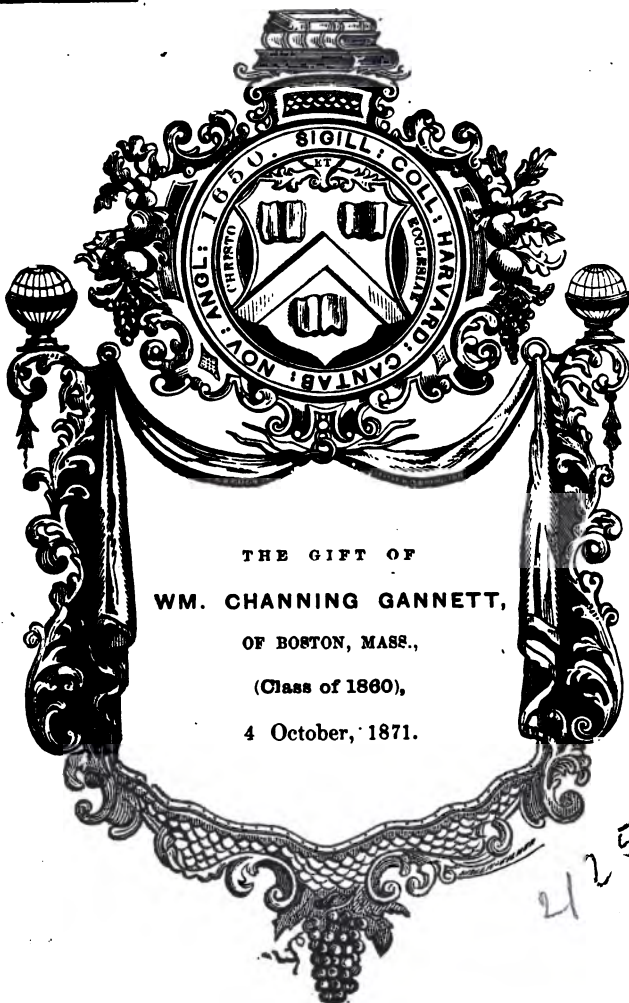
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*CHAMBERS'S EDUCATIONAL COURSE,—EDITED BY  
W. AND R. CHAMBERS.*

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# INFANT EDUCATION

FROM TWO TO SIX YEARS OF AGE.

APPLICABLE TO

THE INFANT SCHOOL AND THE  
NURSERY.

FOURTH EDITION.

EDINBURGH:

PUBLISHED BY WILLIAM AND ROBERT CHAMBERS;

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## NOTICE.

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THE following work, although necessarily entering into the details of an Infant School, will not be duly appreciated if it shall be mistaken for an *Infant School Book* exclusively. With the exception of a few matters of Infant School arrangement, the whole volume may be used to train even a single child in a nursery, under the care of a judicious mother or governess. This will at once appear, when it is considered that the *First* Section contains the general principle of Infant Training,—the *Second* describes the Apparatus, which will be found as useful in the nursery as in the Infant School,—the *Third*, with the exception of classification and monitors, arranges the instruction of a week, which a mother or governess may, if she pleases, adopt in private tuition, besides embodying the requisite intellectual lessons,—and the *Fourth* presents those moral lessons which every child requires, whether alone or in school. Indeed, nothing will more tend to imbue the mind of the private Infant



Instructor with the requisite feelings and qualifications, than familiarity with the entire Infant School System, as set forth in this volume; or will better enable such instructor to impart with full effect the Infant School lessons to the private pupil. If several neighbouring families could agree that their children should meet in the best adapted of their houses for training under one person, a nearer approximation would be made to what may be called the *social* advantages of an Infant School. But even to parents in the country, where such co-operation is impossible, this volume is confidently offered, as a directory of Infant Education generally.

It remains to be added, that, besides the liberal extracts made, with permission, from the publications of Mr Wilderspin, some passages are adopted, also with the concurrence of the author, though without formal quotation, from the work of Mr Simpson on National Education.

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# INFANT EDUCATION

FROM TWO TO SIX YEARS OF AGE.

## SECTION I.—INTRODUCTORY.

### ORIGIN OF INFANT EDUCATION.

THE credit of first propounding and realising the truth, that Education, to be available for the formation of character, cannot begin too early, and that children of two years of age ought to be assembled in numbers for the benefit of physical and moral training, is due to Mr Robert Owen, formerly proprietor of the cotton-mills of New Lanark, and well known for his peculiar views respecting human society. The idea of an early education formed an essential part of his general scheme for the improvement of mankind, and was accordingly explained in a work published by him in 1812, under the title of "A New View of Society." Finding himself placed by fortune in a situation which gave him influence over a considerable body of people, he resolved, as far as possible, to afford an example of the process which he deemed necessary for regenerating mankind, and, on the 1st of January 1816, opened, at New Lanark, what he termed an Institution for the Formation of Character. Upon the building required for this institution he had expended five thousand pounds: it contained five apartments, the largest of which measured ninety by forty feet. The institution practically consisted of a series of schools for the children of the working people, the first being designed to receive them as soon as they could walk, so as to allow the mothers to prosecute their stated employments, and the second to take them up when a little farther advanced. These preparatory schools, as he called them, were fur-

nished with the means of amusing the children ; pictures were hung upon the walls to please the eye, and musical instruments were introduced, for the purpose of setting them a-dancing. Mr Owen was also scrupulous to allow them a piece of play-ground, and to direct that they should be taken into the country in good weather, and made familiar with the objects of nature and art. The rudiments of English were imparted ; but the principal object was the moral training of the children, according to the views of the benevolent founder.

The individual employed by Mr Owen to take the immediate charge of the children, was a weaver named James Buchanan, who, as might perhaps be expected, did not thoroughly enter into the views of his enthusiastic master, but was nevertheless a serviceable teacher. The scheme having become extensively known, a few individuals of political eminence, among whom was Mr (afterwards Lord) Brougham, established an Infant School upon nearly the same plan, in London, in 1818, for which, by permission of Mr Owen, they obtained the services of Mr Buchanan. It is almost unnecessary to say, that, in this seminary, a departure was made from Mr Owen's views, and that, in all subsequent schools of the same kind, many of these have been overlooked.\* It was soon resolved to establish another Infant School in London, for which the locality of Spitalfields was chosen. For this a teacher was not only to be selected, but trained. The promoters of Infant Education in London were well aware how peculiar a range of qualification, moral as well as intellectual, is required in an Infant-School teacher ; how indispensable, above all things, is that benevolent

\* Though Mr Owen has not made much progress in his scheme for altering the character and fashions of society, it is humbly conceived that he is not the less entitled to the national gratitude for the important part he acted in originating Infant Schools, as well as for several other projects, which, we believe, have been acted upon without any acknowledgment of his concern in proposing them.

enthusiasm and vivacity, without which an Infant School flags and expires. On directing Mr Buchanan to aid in their search for a likely person to be trained, he recollected that his school had been visited by a young man of the name of Wilderspin, belonging to a counting-house in the city, who differed from all other visitors in the intensity of the interest which he showed in what was going on, his ready appreciation of the value of the system, and the great delight he displayed in witnessing the improvement and happiness of the infants. Mr Buchanan was directed to sound Mr Wilderspin as to his views in life, and to ascertain whether he might be induced to embark in the profession of an Infant-School teacher, and begin with the Spitalfields school. Mr Wilderspin, when the scheme was proposed to him, requested some days to reflect upon it, as his acceptance, if it should take place, would be no light choice, but a pledge of the devotion of his life to the pursuit. He made up his mind, and, presenting himself to Mr Buchanan, declared himself ready to embark in the enterprise with every energy which he possessed. After benefiting by all the training he could receive from Mr Buchanan, Mr Wilderspin was in due course appointed to the Spitalfields school, which was opened in 1820, and, by his own qualities, and with important aid from Mr Owen in realising the principles of the formation of the infant character, soon became a better Infant School than its London model.

It was fortunate for the cause of Infant Education that the services of this individual were secured for it at so early a period. Applying to his duties a mind of much vigour, activity, and ingenuity, of warm affections, and a zeal that recognised no obstacles, he became the happy instrument of *extending* the blessing of Infant Education far and wide through the country; and partly from his own native sagacity, and partly from the lessons of the originator of the system, he not only diffused a knowledge of the system, as a science in exact adaptation to the human faculties, but enriched its details by long and exten-



sive experience, till it attained its present practical excellence. Mr Wilderspin was soon called into a more extended sphere of usefulness, for his services were eagerly sought to organise schools in other places, both in the metropolis and the country. If an Infant School were wanted in the extreme north of Scotland, or in any part of Ireland, Mr Wilderspin was ready, for the humblest travelling expenses, to proceed thither from Cheltenham, where his habitual residence has latterly been, and to spend six weeks in the training of the pupils and teachers. And it has generally happened, that, when he visited any place, he made such an impression by his lectures, conversation, and realisation of the system in a school, as to cause several other seminaries to spring up in the neighbourhood. The perfect abandonment of self which characterises this extraordinary man, is proved by his offering, at the risk of life itself, to go to the West Indies and organise Infant Schools for the negroes. Those which he has put into operation in the United Kingdom, are now upwards of three hundred; and he has himself been the immediate instructor of above twenty thousand pupils.

#### PRINCIPLES OF INFANT EDUCATION.

*First*, As the Feelings or Affections of human nature, in common speech termed the *Dispositions*, furnish the impulses, according to their direction, to virtue or vice, it is important to address education directly to these feelings, as well as to the intellectual faculties. *Secondly*, The Dispositions being capable of direction either to good or evil, from the very commencement of their manifestations, and being then, indeed, at their greatest degree of pliability, it is of importance that the education of the Dispositions should commence as nearly with the commencement of their manifestations as may be convenient. *Thirdly*, Mere *precept* will not establish, either in infancy or at any other period of life, those moral habits which

flow from well-regulated dispositions. *Example*, though it may be a good auxiliary, is apt to operate transiently, leaving the mind that has been swayed by it liable to the influence of example in any other direction. *Exercise, confirmed into habit*, is the true means of establishing the virtuous character, as far as it is to be established by human means. And how is this to be best carried into practice? That it may be realized to a certain extent in families, is true; but, as the most of families are situated, it can only be so in very rare instances. The general result of home training is the neglect of moral culture at the time when it is most valuable, and the acquisition of every bad habit from yet more neglected companions. It is evidently necessary that children should be placed, as early as convenient, under the influence of a *system* which, without imposing any painful restraint or burden, will ensure their being properly trained. Their being so collected, is incidentally advantageous, in as far as it is only in the state of a community that they can receive much of that culture of the dispositions which is required. Gathered into a place fitted up for the purpose, and under the eye of well-trained instructors, a considerable number of infants form a society of equals, or a larger kind of family, in which the selfish feelings may be regulated, and the social strengthened and improved: in which the *practice* may be rendered habitual of cleanliness, delicacy, refinement, good temper, gentleness, kindness, honesty, justice, and truth: confirming good tendencies in the mind, and leading to virtue in the conduct,—at the same time that the body is strengthened by a judicious use of air and exercise. *Fourthly*, It is believed that the best preparation may be thus made for the reception of the precepts and spirit of Christianity. *Fifthly*, Intellectual instruction, though of secondary importance, should form, nevertheless—provided it be of kinds calculated to interest and amuse, and never to overtask—an important object in an infant school. As most suitable for the infant mind, the earliest lessons should chiefly refer to *real*

*objects*, of which the properties and uses may be explained, so as to impart many new and useful ideas ; to which end, the objects themselves, or lively pictures of them, should be, if possible, presented. The letters of the alphabet, which are also objects, may be learned at this early period ; but care ought to be taken not to press the pupils too rapidly into the intricacies of printed language, which, being emblems or signs for ideas, obviously require a more advanced state of the faculties.

#### DETAILED MAXIMS.

To this view of the principles, chief objects, and uses of infant education, may be added some more detailed maxims.

1st, A watchful observance and management of the temper, the abuse of which is an impulse to violence and anger, should commence when the subject is yet in the cradle. The utmost that can then be attempted is the diversion of the infant from the feeling, when excited, and its object, and the avoidance of all exciting causes of its activity. If this be neglected, a bent is given, which it is difficult ever afterwards to set straight.

2d, The child, so managed by his nurse as to escape the first trials of temper, should be introduced as early as possible to his fellows of the same age ; the best time is when he can just walk alone ; for it is in the society of his fellows that the means of his moral training are to be found.

3d, It is advantageous, nay necessary, that his fellows shall be numerous, presenting a variety of dispositions,—an actual world into which he is introduced, a world of infant business, and infant intercourse ; a miniature of the adult world itself. The numbers should rather exceed fifty than fall much short of it.

4th, But this intercourse must not be at random, each infant only bringing its stock of selfish animalism to aggra-

vate that of its playmates, and establish a savage community. It must be correctly systematized, and carefully superintended by well-instructed and habitually moral and judicious teachers.

5th, The conductor's own relation to his infant charge should be affection, cheerfulness, mirth, and that activity of temperament which delights and keeps alive the infant faculties. He must, at the same time, be firm, and able to command obedience.

6th, The infants should be permitted to play together out of doors, in unrestrained freedom ; a watchful eye being all the while kept upon the nature and manner of their intercourse.

7th, Unceasing encouragement should be given to the practice of generosity, gentleness, mercy, kindness, honesty, truth, and cleanliness in personal habits ; and all occasions of quarrel, or cruelty, or fraud, or falsehood, minutely and patiently examined into, and the moral balance, when overset, restored ; while, on the other hand, all indelicacy, filthiness, greediness, covetousness, unfairness, dishonesty, violence, tyranny, cruelty, insolence, vanity, cowardice, and obstinacy, should be repressed by the moral police of the community. No instance should ever be passed over. Honour and truth should be the very atmosphere of the school ; and a promise to the children should be scrupulously remembered and performed.

8th, There ought to be much well-regulated muscular exercise in the play of the infants, which should be as much as possible in the open air.

9th, Their school-hall should be large, and regularly ventilated when they are out of it, and when they are in it, if the weather permits ; and the importance of ventilation, air, exercise, and cleanliness, should be unceasingly illustrated, and impressed upon them as a habit and a duty.

10th, Every means of early implanting taste and refinement should be employed, for these are good pre-occupants of the soil, to the exclusion of the coarseness of vice.

The playground should be neatly laid out, with borders for flowers, shrubs, and fruit-trees, tasteful ornaments erected, which the coarse-minded are so prone to destroy, and the infants habituated not only to respect but to admire and delight in them ; while the entire absence of guard or restraint will give them the feeling that they are confided in, and exercise yet higher sentiments than taste and refinement.

11th, The too prevalent cruelty of the young to animals, often from mere thoughtlessness, may be prevented by lessons on the subject, and by the actual habit of kindness to pets, kept for the purpose, such as a dog, a cat, rabbits, ducks, &c. ; and by hearing all cruelty, even to reptiles, reprobated by their teacher and all their companions. An insect or reptile ought never to be permitted to be killed or tortured.

12th, The practice of teasing idiots or imbecile persons in the streets, ought to be held in due reprobation, as ungenerous, cruel, and cowardly. In the same way, other hurtful practices, even those which are the vices of more advanced years, may be prevented by anticipation. For example, ardent spirits-drinking may, for the three or four years of the infant training, be so constantly reprobated in the precepts, lessons, and illustrative stories of the conductor, as to be early and indissolubly associated with poison and with crime, instead of being, as is now too much the case, held up to the young as the joy and privilege of manhood.

13th, Many prejudices, fallacies, fears, and superstitions, which render the great mass of the people intractable, may be prevented from taking root, by three or four years of contrary impressions ; superstitious terrors, the supernatural agencies and apparition of witches and ghosts, distrust of the benevolent advances of the richer classes, suspicions, envyings, absurd self-sufficiencies and vanities, and many other hurtful and antisocial habits of feeling may be absolutely excluded, and a capacity of much higher moral principle established in their stead.

14th, Besides the moral habitudes, which have been here exemplified rather than fully enumerated,—habitudes gained by four years *practice* for at least six hours every day, and carefully identified with the morality of Christianity,—the Intellectual faculties must not be neglected in infant training. Those which begin early to act must be the better for early judicious direction and exercise. At six months old, infants are commencing the use of the faculty of *observing* external objects, and are seeing, hearing, and touching, with marked acuteness and activity. A judicious nurse, instructed in the infant faculties and their relative objects, might direct and exercise all these powers to their great improvement, so as to render them better instruments for the infant's use, when, at two years old, he joins a number of his contemporaries. The stimulus of numbers will work wonders on the child, and bring out his observing and remembering intellect in a manner that will surprise his family at home. The first objects of his attentive observation will be his numerous little friends; then all the varied objects of that new world, the infant seminary; its pictures, numerous and highly-coloured beyond his dreams; the curiosities of the little museum; the flowers; the fruit-trees, the dressed border of the playground, the swings for exercise, the wooden bricks for building, the astonishing movements, and feats, and learning, and cleverness of the trained pupils, will all fill the youngest new-comer with wonder, delight, and ardour, and heartily engage him in the business of the place in a day or two. A skilful teacher will keep up the activity of the faculty of *wonder*, thus excited, as long as he can without the risk of exhausting it. Every object presented is now a wonder, to be eagerly gazed at, and curiously handled; and here will commence, with zeal on the infant learner's side, that grand but recent improvement in education, REAL, as distinguished from merely VERBAL, intellectual training; but yet real including verbal as an accessory, instead of verbal excluding real. The recent discovery, that it is better at once to

introduce the pupil to the real tangible visible world, than to do no more than talk to him about it in its absence, is of immense value, and of admirable application to infant intellectual training. The child of two years is acutely appetised for *things*, but yet very feebly for *words*: when, by a grand error, words are forced upon him, things will infallibly take off his attention, and often has he been punished for evincing a law of his nature, inattention to his 'book.' If the instructor understands and obeys nature, he will readily and judiciously supply things or objects to those faculties in his pupil, which were created to be intensely gratified with the cognisance of them. In a judicious supply of objects, there will be a scientific combination of the pupil's delight with his improvement. The objects should be arranged in lessons, and successively presented to the pupil's senses and faculty for observing existences. The simple and obvious qualities of any object are inseparable from it, and should be carefully pointed out to him; while, by a succession of objects, he will learn a variety of qualities, till he has mastered all the qualities of external objects, cognisable without chemical analysis.

The lessons are never continued too long, seldom beyond an hour; while the intervals are filled up with short portions of exercise in the playground, in which the teacher often joins, keeping up spirit and active movement, while he is narrowly watching moral conduct and social intercourse. The school-room is regularly ventilated, by cross windows, when the children are out of it, properly warmed in winter, and kept particularly neat and clean, and even showy; while the pupils are habituated to value these attentions, and receive lessons upon their end and object, which they carry to their homes, where they are most needed.

Careful provision is made in the infant system to give early religious *impressions*, in a manner which shall connect religious ideas with every thing in life, and render them a means of happiness, and not a source of tasks and

punishments for the present, and terror for the future. Every lesson, every step in the simplest knowledge, is made a channel for allusions to, and illustrations of, the Creator's power and goodness; while His will that his laws, moral and physical, shall be obeyed, is rendered obvious, by an exposition of the evils resulting from disobedience, and the benefits from obedience. Thus, the Creator is always kept in view, not alone as an awful Judge seated on high, watching the thoughts and actions of his creatures to reward or punish them hereafter,—a view of him which addresses selfishness alone, and never can produce elevation of feeling,—but as the PRESENT GOD, the Essence of every thing around us, guiding us to temporal as well as eternal happiness, by his infinite wisdom and goodness. These *real* impressions lay an early foundation for the love of God, which no mere precepts, still less ill-judged threats, can ever succeed in producing. The Saviour's history, which exercises and delights the higher faculties, is detailed in the most attractive manner, and what he did for mankind simply expounded; while the morality of his precepts and the benignity of his example are easily and beautifully shown to be the very kindness, justice, and truth, which the children are taught to exercise in their mutual intercourse. Thus, the morality of their everyday conduct, and their habitual love of God, are connected with the morality of Christianity, and associated in their minds as identical with it. No creed or catechism of any sect whatever, dominant or dissenting, is taught them; not only because the children of many sects unite in the same school, but because religion taught to the very young in that form, has been found at once unintelligible and repulsive. Scripture history, illustrated by well-chosen engravings, coloured to attract, conveys to them, in a pleasing manner, the leading facts of both Testaments, and always with a heart-improving application; while their prayers and hymns are of the simplest, most improving, and least sectarian character. This is a more fitting preparation for *ulterior* instruction by the pastors



of their respective persuasions, (upon whom the duty should mainly fall,) than it is presumed any body of Christians will achieve by any other mode whatever.

#### EDINBURGH MODEL SCHOOL.

As the Edinburgh Model School has now been at work for five years, it will not be out of place to state shortly how the experiment has succeeded. In 1832, a Report was published by the Directors of the Society, which—after detailing the progress of the children *intellectually*, which was witnessed by the public at several stated exhibitions characterised by the spirit, animation, and zeal inspired by the system—adds, in an appendix, a series of incidents, the results of the moral influence of the place, classed according as they manifested kindness, brotherly love, gentleness, and mercy—truth, honesty, and honour—attachment, refinement, &c.; and the picture, considering the class of life, is most satisfactory. We have extracted largely from that Report,\* and earnestly request the reader to peruse that extract, which, from its great interest, will well reward his trouble. It will be found that quarrelling rarely occurs, fighting is unknown, insolence and selfishness restrained, found money faithfully restored; that provisions, however exposed, remain untouched; that kindness, and even generosity, is manifested; that mercy to animals, cleanly habits, and horror of ardent spirits, are inculcated and expressed; and that refinement and ornament are respected. A few specimens, out of many letters received from the parents, are added, which show the improvement effected on the conduct and demeanour of the children at home; namely, a change from filth, laziness, obstinacy, waywardness, and selfishness,—to cleanliness, activity, docility, respect, and kindness. A second Report has been published in 1835, and not less favourable. Some incidents from that Report are added in the Appendix.

\* Appendix, No. 1.

While all appliances, direct and indirect, are resorted to, for the purpose of regulating the inferior, and cultivating the superior feelings, that grand solecism of ordinary seminaries of education, an appeal to pride, vanity, and love of gain, three grand enemies of human weal, is avoided within the walls of an infant school. There are no prizes, medals, or places of distinction among the infants. These are banished, or rather are unheard of, as incompatible with the morality of the system ; its chief object being to moderate selfishness, they would be as self-defeating as oil applied to extinguish fire. They are, moreover, quite superfluous under a system of training which gives delight by exercising so many of the faculties, and succeeds in keeping up for years a degree of animation, attention, and zeal, which the selfish impulse of places and prizes never yet attained, in the dull routines which require these artificial stimulants. Mr Wilderspin, on being asked if he had ever tried place-taking, answered, “ *My* infants would scorn the *baby* practice ; it would lower the whole character of the school, and defeat my best endeavours for their moral improvement.” It may be added, that it would lower the *intellectual* character of the place not less, inasmuch as it would spur the clever few to learn in order to gratify a selfish feeling, while the great majority would give up the race from despairing of the prize, which is absurdly rendered the chief attraction and motive to exertion. We will not consume time on the other well-known stimulus in ordinary schools,—punishments. These are directed to a base fear, often excite malignant feelings of revenge, and would, unless under the most cautious regulation, be as hurtful as unnecessary in a well-conducted infant school. Mr Wilderspin has found some sort of punishment necessary ; but he has made it consist rather in the exposure of delinquency by a solemn investigation,\* than in any actual bodily suffering. When guilt was brought home in a trial by his peers, the offender

\* See Appendix, No. III. for an example.

has received a pat, or, in aggravated cases, two pats on the hand, which had the effect of realizing the verdict, and impressing the result more palpably. No harm can come of this, but distinctions and prizes may do incalculable mischief to the character for life.

#### OBJECTIONS ANSWERED.

Viewing Infant Education as the most powerful instrument of moral elevation yet invented by man, it is important to remove any objection which inattention to its real nature is apt to throw in the way of its progress. Its novelty and utter dissimilarity to any preceding system, and its inconsistency with all the notions hitherto entertained of infant capabilities, have combined to raise against its first announcement the strongest prejudice. 1st, The idea is ridiculed of teaching children from two to four years of age any thing. It is called education run mad,—a hotbed of precocity,—parrot training,—confinement and tasks when children should run wild,—realizing the adage, “soon ripe soon rotten,” and so forth. It is impossible to present a more instructive example of that ignorance of the human faculties which is so prevalent in society, than these objections, which, it must have been observed, are promptly and unreflectingly stated, and with considerable dogmatism, in many a company where infant schools are mentioned. It is utterly unsuspected by the objectors, that man is a moral as well as an intellectual being; that he has *feelings* which require education, and that on the right training of these depend the happiness of the individual and the welfare of society, infinitely more than on the highest attainments merely intellectual. Now, the education of the feelings has already been shown to be the primary and paramount object of the infant school system: it has, moreover, been distinctly laid down, that these feelings are incomparably more easily bent and moulded to good in infancy than in after years; that after

six years of age their effectual culture is, in many cases, nearly hopeless ; hence, to delay it till this age would be to leave it out of education altogether ; and this, to the heavy cost of society, has been hitherto the ignorantly adopted alternative.

But, again, while *moral* training is the primary object of infant education, it has been found natural and advantageous to ingraft upon that training a most beneficial *intellectual* culture, suited to the tender age of the pupils, and very far indeed from meriting the incredulous contempt with which the objectors treat it. No intelligent or candid person can read Mr Wilderspin's work on the system, but, above all, *see* the inspiring spectacle of a well-conducted infant school, and persist in maintaining that the intellectual culture is injudicious, premature, annoying to the children, and useless : the intellectual faculties, and ALL these faculties, not one or two of them as in ordinary schools, are moderately exercised, so as to combine amusement with instruction ; and as they are presented with their appropriate objects, they cognize and enjoy, with complete comprehension, every object presented. Their studies are varied with healthful exercise and constant amusement, story, song, and fun ; nothing like a task annoys them, and they obtain, without an exertion, much fundamental knowledge to serve them for life.

2d, Those who are not so decided on the objection of premature education, are yet extremely peremptory on the point of committing the early years of infants to any other care than the mother's. It is to break, they say, the hallowed bond which unites the parent and the child, to alienate the heart of the infant from his proper guardian, and take away from the latter all motive for parental solicitude. In answer to this, reference is made to the letters from the parents of children at the Edinburgh Model Infant School, as the best possible evidence of the working of the system in this important particular ;\* the letters dwell with pleasure upon the

\* Appendix, No. I.

improvement perceived in the children in love for, and concern about, their parents; obedience and obligingness are the every-day fruits of this improvement, and there cannot fail to be that beautiful reaction which, through the affectionate influence of the child, insensibly reforms and christianizes the parents. Accordingly, the letters state the fact with gratitude, that the children, who used to be a nuisance at home, are now a pride and pleasure, and the parents look for the period of their return from school as the most cheerful hour of the day. A slight reflection would, independent of such evidence, serve to convince any person, that separation of the child from the parents for six hours in the day, is no greater separation than actually takes place in every rank of life; eighteen hours out of the twenty-four may surely suffice to recover the affections which six hours absence may have endangered: but there is so much nonsense in this objection, that it is really to lose time to answer it gravely. Can it be said that parents in the lower classes in general are fitted to exercise their children in moral, religious, cleanly and wholesome habits? Nay, more, are there many parents in the middle and higher classes, who, committing their children, as they do, to the exclusive society of nursery-maids for much more than six hours a-day, can say that they have time, and method, and means, for communicating moral improvement to their children, superior to what is done according to a system founded on the most philosophical principles, and the most enlightened views of human nature,—the Infant School system of Wilderspin? Mothers of intelligence, accomplishment, and experience, have been heard to admit and regret that the principles of early moral education *cannot* be regularly, systematically, and efficiently applied at home. The important, nay indispensable, element of *numbers*, to exercise practically the social virtues, is wanting, and is not supplied by a few children of different ages in the same nursery; in *no* nursery is it possible to prevent selfishness, contention, and even fighting. Moreover, in

the best conducted family, the children are left with servants for a longer period than the hours of an infant school,—that “*well-regulated, systematic nursery*,” as it has been happily called,\* where the children of ALL classes of society would be greatly benefited by spending several of their earliest years.

3d, This word ALL has raised strong opposition, and that from many who admit that infant schools may be beneficial to the lower classes, but maintain that all *educated* mothers ought to be the sole guides of the infant years of their children. This sounds well; but let any one look around in the circle of his acquaintance and point out if he can, ten—five—nay, one mother qualified to communicate to her infant a tithe of the advantages he will derive from the *system* of an infant school? Why should a mere prejudice deprive an infant of this mighty blessing, because he chances to be born of richer parents,—in that event a great misfortune to him,—than another who, because he is poor, is qualified to enjoy it? If it were not certain that, when the infant-education system shall come to be understood, it *must* be eagerly sought by parents of all grades in society, there would be reason to expect that, in the course of time, the class enjoying it would rise higher in character than the class rejecting it, and thereby higher in social rank. This would settle the question whether or not Infant Schools are suitable for the higher classes of society.

\* By the Lord Advocate Jeffrey in his speech at the meeting when the Infant School Society of Edinburgh was formed in 1829.

## SECTION II.

## ORGANIZATION OF AN INFANT SCHOOL.

## BUILDINGS.

The SCHOOL HALL should be in a dry and airy situation—should be oblong, to save expense in roofing—should have a wooden floor—and should never be higher up than the basement or ground story, in order to allow a ready exit to the playground.\* The size of this room will depend upon the numbers likely to attend; and, as it will often be used for play, it should be ample. Fifty pupils will require a room twenty-six feet long, by fifteen broad, and eleven high; a hundred pupils one forty feet long, by twenty in breadth, and twelve in height; a hundred and fifty pupils one fifty feet, by twenty-five and thirteen; and two hundred pupils, the largest number which can be undertaken by one teacher, will require a room sixty feet, by twenty-eight and fourteen. A fifth more may be enrolled in all cases, to allow for absences.

The CLASS-ROOM, which is chiefly used for reading lessons to the more advanced pupils, may be either an adjoining building, or, as is more convenient, in the teacher's house above the school. It does not require to be large.

The TEACHER'S HOUSE may be erected most cheaply as a second story to the hall, and should consist of three or four rooms and kitchen, with proper conveniences. For the sake of ventilation, the windows of the school hall must be capable of letting down from the top, and one or more apertures in the ceiling will also be necessary. The apartment may be furnished with a heated air stove, placed on a stone or brick pavement a few feet from the wall at one end of the hall, with a fender or rail round it;—or, if the addi-

\* See plan at the end of the Appendix.

tional expense were not grudged, a superior mode of heating might be obtained by means of hot water circulating round the walls in tubes.\* Leaving one end of the hall for the gallery, there should be two steps for seats all round the rest, close to the walls,—the first step eight inches high, by eighteen broad, to give room for the feet of the children seated on the back or more elevated seat, which is just another step eight inches high.

The GALLERY.—This important part of an infant school-hall is simply a series of steps, the whole width of the room, ascending from the floor. The first or lowest is eight inches high from the floor, and eighteen wide; and all the rest are of the same height and breadth, respectively rising above each other. By a rail down the centre, the gallery is divided into two equal parts,—the one for the boys, and the other for the girls. The number of rows will depend on the number of pupils to be seated. Allowing *one foot* for each child, and supposing the hall twenty-eight feet wide, it would require eight rows of twenty-eight feet each to seat 200. The height at the front being eight inches, that at the back wall will be sixty-four inches, or five feet four inches, and the horizontal line from front to back on the floor will be 144 inches, or twelve feet. When seated in the gallery, every child will be seen by the teacher, and will see him; an arrangement necessary for simultaneous studies, employments, and movements.

The **ROSTRUM** is a small platform, to hold one, two, or three children, when acting as general monitors to the whole school in the gallery. A low rail round it will prevent the children from falling from it. It ought to be removable.

#### THE APPARATUS.

*Moveable Lesson Posts*, four feet high, and two inches broad, by one thick, on a round or cross base, should stand

\* This apparatus is furnished by Perkins and Co., London.



five or six feet apart, and in the direction of the length of the room, three or four feet outwards from the front step round the walls.\* On these posts, boards, with the lessons upon them, are hung by a ring on a hook, which is the easiest contrivance for shifting them. Of course, the number of posts will be regulated by the length of the hall, and number of the pupils. A semicircle of six pupils and a monitor will front each board; their semicircle being marked permanently on the floor with brass nails.

*Coloured Prints* of Scripture subjects, animals, costumes, trades, natural objects, &c., pasted on boards of wood or strong pasteboard; some with, and others without, letterpress descriptions beneath; are hung tastefully on the walls, and easily taken down for reference.

*Brief Scriptural, Moral, Prudential, and Economical Maxims*, printed in large letters, and pasted as above, are also hung conspicuously round the walls; such as—

#### I.—SCRIPTURE TEXTS.

1. Suffer the little children to come unto me, and forbid them not: for of such is the kingdom of heaven.
2. Hearken unto thy father, and despise not thy mother when she is old.
3. Train up a child in the way he should go; and when he is old he will not depart from it.
4. A child left to himself bringeth his mother to shame.
5. Remember now thy Creator in the days of thy youth.
6. These things I command you, that ye love one another.
7. Children, obey your parents in all things.
8. Even a child is known by his doings.
9. I love them that love me; and those that seek me early shall find me.

\* See plan at the end of the Appendix. The posts are marked by a series of asterisks.

10. The fear of the Lord is the beginning of wisdom ; a good understanding have all they that do his commandments.
11. Thou God seest us.
12. Thou shalt not steal.
13. The wages of sin is death.
14. The Lord is nigh unto all that call upon him.
15. If ye love me, keep my commandments.
16. If sinners entice thee, consent thou not.
17. Fear God—honour the King.
18. Judge not, that ye be not judged.

II.—MAXIMS.

1. War is the curse of nations.
2. All men are brethren.
3. Christianity disowns religious hatred.
4. Never prejudge.
5. Think well before you give your opinion.
6. Be humble, and respect others.
7. Boast not yourself on your possessions.
8. Avoid rude contradiction.
9. Be easily pleased.
10. Be fair and candid to opponents and rivals.
11. Pride and vanity always defeat their own end.
12. Jealousy and envy flow from a bad heart.
13. Always protect the weak.
14. Superstition is folly.
15. Cruelty to animals is great wickedness.
16. Never wantonly break or destroy.
17. Be cleanly, modest, and delicate.
18. Consider the feelings and the wants of others.
19. Neither believe nor repeat an ill report.
20. Beware the fire.
21. Fresh air is health.
22. Ardent spirit is poison.
23. Drunkenness is the cause of many crimes.
24. Never impute bad motives to others.

25. He who buys what he does not want, will not be able to buy what he does want.
26. In youth and health lay up for old age and sickness.
27. Waste not, want not.
28. A place for every thing, and every thing in its place.
29. Knowledge is power.
30. Be content with your condition, and grateful to God for your mercies.
31. Beware of ridicule.
32. Never be idle.

On all the above texts and maxims—taking one at a time from the wall—the teacher ought often to exercise the pupils, and to be assured that they perfectly understand them, and are able to give good reasons for them.

*Various Drawings*, illustrative of lessons, such as the face of the clock, with moveable hands—the mariner's compass—the sphere with its zones—geometrical figures and geographical maps—will also be displayed on the walls, and be ready to be taken down for use.\* A box for small cards, the size of playing cards, with a great variety of lessons, questions, and answers, upon them.

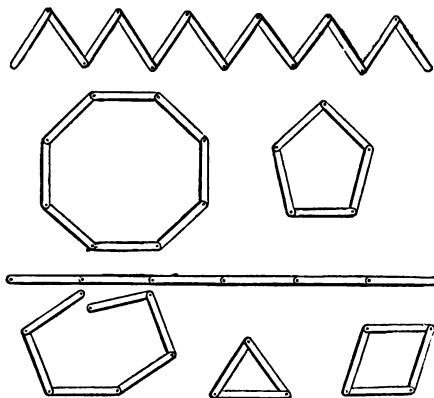
*A Set of Objects*, for lessons on objects according to the system of Dr Mayo of Cheam, down to the end of his fourth series.

*Miscellaneous Articles* of curiosity and instruction, such as, specimens of natural productions, models, stuffed birds and quadrupeds, curiosities, &c. &c., which those who have them—often as lumber—will willingly contribute to the school museum.†

\* Display of separate pictures on the walls is better than what is called the *Rudiment Box*; on which they are pasted on ten or twelve yards of calico, made to roll off one roller on to another within the case, and showing themselves as they pass at an aperture, which each picture fills.

† The able teacher of the English department in the High School of Glasgow, Mr Dorsey, obtained, through his pupils, 600 specimens in the space of two months, without expending one shilling.

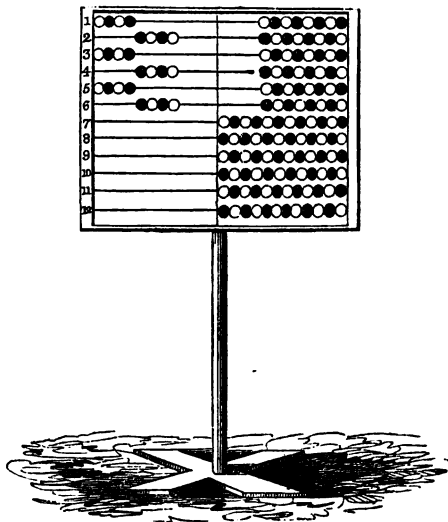
*The Gonigraph* is a small instrument composed of a number of flat steel rods connected by pivots, which can be put into all possible geometrical figures that consist of straight lines and angles, as triangle-squares, pentagons, hexagons, octagons, &c.



*The Arithmeticon*, represented in the annexed cut, is a most useful instrument. In an oblong open frame, twelve rows of wooden balls, alternately black and white, and of the size of a nutmeg or small walnut, and twelve in each row, are strung like beads on strong wires. The instrument, including the stand, is about four feet high, the frame being one-fourth part broader than it is high. It may be made much smaller for nursery use.\* When it is used to exercise the children in arithmetic, the teacher or monitor stands behind and slides the balls along the wires from *his* left to his right, calling out the numbers he shifts, as—twice two are four—thrice two are

\* See an inventory or list of apparatus as used in the Edinburgh Model Infant School, with some additions, Appendix, No. IV.

six—shifting first four balls, and then two more the children are apt to confuse the balls remaining those shifted, a thin board covers half the surface side next the children, as marked by a line down the centre, so that they see only the balls shifted to the side.\*



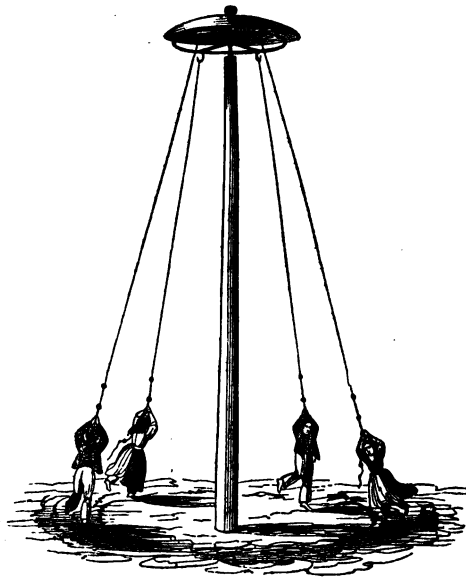
\* The *Arithmeticon* is Mr Wilderspin's invention; his work he lays claim to a beneficial connexion with it no honourable mind would deny him. We cordially acknowledge his monopoly; and recommend to all who establish schools, to purchase the instrument at his depot at Chelsea or of his agents in London, Edinburgh, Dublin, &c. this, as well as the bulk of the apparatus for an infant school, is better economy to purchase than to attempt to make. A fundamental principle in economics, according to Dr Smith, never to manufacture what you can buy cheaper

## THE PLAYGROUND.

No pains should be spared on this principal and paramount department of a proper infant school. An infant school without playground—and there are some that have not this spot of healthful exercise, moral intercourse, and infant happiness—may shut its doors; it is an infant school only in name. The more extensive the ground may be, the better; but the smallest size for 200 children ought to be 100 feet in length, by at least 60 in breadth. It should be walled round, not so much to prevent the children from straying, as to exclude intruders upon them, while at play: for this purpose, a wall or close paling, not lower than six feet high, will be found sufficient. With the exception of a flower border, from four to six feet broad all round, lay the whole ground, after levelling and draining it thoroughly, with small *binding* gravel, which must be always kept in repair, and well swept of loose stones. Watch the gravel, and prevent the children making holes in it to form pools in wet weather; dress the flower border, and keep it always neat; stock it well with flowers and shrubs, and make it as gay and beautiful as possible. Train on the walls cherry and other fruit-trees and currant-bushes; place some ornaments and tasteful decorations in different parts of the border,—as a honey-suckle bower, &c., and separate the dressed ground from the gravelled area by a border of strawberry plants, which may be protected from the feet of the children by a skirting of wood on the outside, three inches high, and painted green, all round the ground. Something even approaching to elegance in the dressing and decking of the playground, will afford a lesson which may contribute to refinement and comfort for life. It will lead not only to clean and comfortable dwellings, but to a taste for decoration and beauty, which will tend mainly to expel coarseness, discomfort, dirt, and vice, from the economy of the humbler classes.

*The Rotatory Swing.*—For this excellent and safe exercise, erect at the distance of thirty feet from each other, two posts or masts, from sixteen to eighteen feet high above the ground; nine inches diameter at the foot, diminishing to seven and a-half at top; of good well-seasoned hard wood, or Norway timber; charred with fire about three feet under ground, fixed in sleepers, and bound at top with a strong iron hoop. In the middle of the top of the post is sunk perpendicularly a cylindrical hole, ten inches deep, and two inches in diameter, strengthened by an iron ring two inches broad within the top, and by a piece of iron an inch thick to fill up the bottom, tightly fixed in. A strong pivot of iron, of diameter to turn easily in the socket described, but with as little lateral play as possible, is placed vertically in the hole, its upper end standing four inches above it. On this pivot, as an axle, and close to the top of the post, but so as to turn easily, is fixed a wheel of iron, twenty-four inches diameter, strengthened by four spokes, something like a common roasting-jack wheel, but a little larger. The rim should be flat, two inches broad, and half an inch thick. In this rim are six holes or eyes, in which rivet six strong iron hooks, made to turn in the holes, to prevent the rope from twisting. To these hooks are fixed six well-chosen ropes, an inch diameter, and each reaching down to within two feet of the ground, having half-a-dozen knots, or small wooden balls, fixed with nails, a foot from each other, beginning at the lower extremity, and ascending to six feet from the ground. A tin cap, like a lamp cover, is placed on the top of the whole machine, fixed to the prolongation of the pivot, and a little larger than the wheel, to protect it from wet. To this, or to the wheel itself, a few waggoners' bells appended would have a cheerful effect to the children. The operation of this swing must, from the annexed cut, be obvious. Four, or even six children lay hold of a rope each, as high as they can reach, and starting at the same instant, run a few steps

in the circle, then suspend themselves by their hands, drop the feet and run again when fresh impulse is wanted ; again swing round, and so on. A child of three or four years old will often fly several times round the circle without touching the ground. There is not a muscle in the body which is not thus exercised ; and to render the exercise equal to both halves of the body, it is important that, after several rounds in one direction, the party should stop, change the hands, and go round in the opposite direction. To prevent fatigue, and to equalize the exercise among the pupils, the rule should be, that each six pupils should have thirty or forty rounds, and resign the ropes to six more, who have counted the rotations.





*Wooden Bricks.*—Toys being discarded as of no use, or real pleasure, the only *plaything* of the playground consists of bricks for building, made of wood, four inches by two and one and a-half. Some hundreds of these, very equally made, should be kept in a large box in a corner of the ground, as the quieter children delight to build houses and castles with them; the condition, however, always to be, that they shall correctly and conscientiously replace in the box the full complement or *tale* of bricks they take out; in which rule, too, there is more than one lesson.

*Water Closets.*—In a corner of the playground, concealed by shrubbery, are two water-closets for the children, with six or eight seats in each; that for the boys is separate from, and entering by, a different passage from that for the girls. Supply the closets well with water, which, from a cistern at the upper end, shall run along with a slope under all the seats, into a sewer, or a pit in the ground. See that the closets are in no way misused, or abused. The eye of the teacher and mistress should often be here, for the sake both of cleanliness and delicacy. Mr Wilderspin recommends the closets being built adjoining the small class-room, with small apertures for the teacher's eye in the class-room wall, covered with a spring lid, and commanding the range of the place. There is nothing in which children, especially in the humbler ranks, require more training; in the neighbourhood of a village, they are an intolerable nuisance; but infant-school-trained children are a most satisfactory exception: no more need be said to the judicious on this point—but so much was indispensable.

#### THE TEACHER.

This is a better name than *master*, for it is more accordant with the friendly spirit of the system. A male teacher

is decidedly preferable to a female, from that greater power of character in the man which the children instinctively feel, and to which they more unhesitatingly defer. But to a well-conducted infant school, both a master and mistress are indispensable; and in every view it is desirable that they should be man and wife.

No mistake can be more fatal, than that any sort of person is good enough to take charge of an infant school. It is, on the contrary, a function which requires a rare combination of endowments.

*First,* The teacher, and of course his wife, should have acute moral perceptions, especially in benevolence, justice, and piety. A defect in these, utterly unfits the teacher to watch the manifestations of the pupils, and guide them aright. The inquiry *here* should be searching;—the minister of the applicant's parish and his respectable neighbours should be called as witnesses to his fulfilment of moral duties in all the relations of life; and, to whatsoever extent mere external duties may be certified, reject the candidate on any overt act established of cold-heartedness, unfairness, falsehood, or profanity.

*Secondly,* Both teachers must be fond of children and their society, and patient of their innocent monotony, and often waywardness; otherwise the duty will be irksome, and imperfectly performed.

*Thirdly,* The teachers must be of a gay, cheerful, lively, active temperament and manner, which never varies or flags; with a faculty for fun, and jokes, and stories, to keep the children alive, attentive, and happy.

*Fourthly,* There must be perfect command of temper, imperturbable patience, and great kindness and gentleness of manner towards the children, so that they will respond to the teacher's treatment of them as they would to that of a kind parent. He must be musician enough to sing readily any air; and if he can play the violin or flute, so much the better.

*Fifthly,* He must be quick, alert, and observant, and not a movement must escape his eye, or a sound his ear;

and, as such a person certainly will do, he must possess a store of useful knowledge of all kinds, scriptural and secular, which he can communicate in a ready, striking, and attractive manner, so as to command the delighted attention of his infant pupils, rouse them with the wonderful and the curious, and from a habitually pious and moral frame of mind, connect a religious and moral impression with all he so communicates.

*Sixthly*, He must have discriminating good sense, and judgment, and tact to ascertain the characters of his pupils; with a degree of firmness and authority, which kindness and even familiarity shall never endanger, so that, while he can descend almost to be a child with the children, he retains complete command of them.

*Lastly*, The teacher's whole heart and soul must be in his duties, which, collectively and singly, are of a nature to require the energy of an enthusiast; and it is really because the endowments required are of so high an order, and that the teacher of an Infant School will consequently take a station in society corresponding to his accomplishments, that qualified men will come forward into so rich a harvest field, where the reapers are yet so few. It is earnestly repeated, SPARE NO EXERTIONS IN SELECTING A PROPER TEACHER.

#### TRAINING OF TEACHERS.

It is scarcely necessary to add that, if any teacher requires to be previously trained, it is the teacher of an Infant School. To train teachers is an important purpose of the institution of Model Infant Schools in several large towns in Britain and Ireland. In order to attain to the method, and become familiar with the whole system, such attendance ought not to be less than two or three months, during all the hours of each day's school and playground exercise; and, during the latter part of their probation, as much practice as possible in actually teaching the school,

under the teacher's directions. If it be possible to have this advantage, let no teacher be appointed without it. Those who associate to form an Infant School, should lay their account with the preliminary expense of boarding their future teacher in a place where a Model Infant School is established, having already satisfied themselves that he is a well-educated, and properly qualified person, who requires no more than a knowledge of the peculiarities of the infant system.

Young men possessing the natural endowments for the employment, will find it their interest to qualify themselves beforehand to become candidates, ready at once to take charge of Infant Schools; and when these institutions become what they ought to be, they will afford such prospects of a continued independence, as will warrant the step, as necessary to such teachers,—of an early marriage.

#### FIRST ASSEMBLING OF THE SCHOOL.

Having built the school-house and teacher's house, provided the apparatus, laid out the playground, and appointed the teacher, make known the day for enrolling pupils, by advertisements and handbills if necessary, and use every means of explaining the nature of the institution to the uninformed, and creating an interest in it; especially induce as many as possible of persons among the humbler classes who are *leaders* in their small circles, to send their children to it, and to exert themselves to remove prejudices which may exist against it. Enrol on the first day a moderate number, as thirty or forty, and postpone farther enrolment till these are brought in to be somewhat at home in the new system.

Enter in a book the names of the children enrolled, with columns for their age, their parents' names and residences, and whether or not the children have been vaccinated, and have had measles and hooping-cough. It is a good rule to refuse unvaccinated children, till they return

vaccinated. The mark on the arm is the best evidence, and should always be looked for.

It is quite imperative for the mothers and all the friends of the children, to withdraw, and leave the children with the teacher and his wife. As long as the former are in sight, it will be vain to proceed to business. When the mothers or friends disappear, a general burst of grief and tears may be expected. No attempt should be made to compel silence; the scene would only become the more confused. In due time crying will be found tiresome by the infants themselves, and the moment should be seized to *astonish* them with some very extraordinary exhibition, at which the whole will gaze in mute amazement. The teacher will then ask them if they would like to hear a story about what they are looking at, when some few who may have been previously trained, will answer in the affirmative. Whenever the infants are brought to listen, the victory is gained, as has been found by long unvarying experience. The few trained children should now go through some little exhibitions, which will have a powerful effect upon the new comers; and presently the whole party should have a trial of the playground, where the trained children will go round on the swing, build up a tower with the bricks, and perform other attractive feats, till the bell rings for school again, the little '*tame elephants*' taking the lead in running back and taking their seats, when instantly something attractive will commence, and so on till the hour when the mothers return to take the children home. Mr Wilderspin never found any difficulty the second day. It is found better to seat the younger children by themselves in the front rows, as the elder children are apt to annoy them.

When the party enrolled are all a little advanced, and completely reconciled, another enrolment may take place, and that more numerous than the first, and so on, till the numbers intended, or attainable, are completed. The trained proportion are invaluable in reconciling the strangers. These latter, in their most inconsolable paroxysms

of grief, are unable to resist the sudden effect of several rounds of clapping of hands in exact time, like a platoon of soldiers, followed by imitations of a breeze, a gale, and a storm, and finished by some curious song. The playground affords a powerful aid in attracting the newly entered. The accustomed children take great delight in introducing them to all its rules, conveniencies, and pleasures; and the teacher adds his confirmatory directions, so that the wildest entrant is *broke in*, as it were, in a day or two. Every thing is put to its right use, and nothing is abused, injured, or destroyed. While the school is training, no strangers should be admitted: besides that there is nothing worth seeing, and an unfavourable impression may be taken up,—it distracts both teacher and pupils to attend to visitors.

With the following rules for the teacher and the pupils, this section may be brought to a close.

#### RULES AND DIRECTIONS FOR THE TEACHERS.

1. See that the school-room is kept swept, and washed once a-week, seats included.
2. Regularly open and close the school meetings with a hymn sung, and prayer said, by the children.
3. Teach the Scriptures in school daily; and endeavour to bring Scripture truth and sound moral principle to bear practically on the children's minds and consciences, with that affectionate simplicity and mildness which suit their tender years, and tend to render religion and morality objects of their love. If the parents of any of the children intimate that they wish to keep the religious instruction of the children in their own hands, as is likely with Catholic or Jewish parents, carefully separate such children whenever the rest are engaged in any kind of religious exercise.
4. Never leave the children in the playground without the diligent and anxious superintendence of one of the teachers at least. Both should be present, and watchful.

5. Pay the most scrupulous attention to the ventilation of the school-hall, so that on no account the children shall breathe bad air. The windows should regularly be let down from the top when the children go into the playground ; and in warm weather should be kept down, taking care not to expose the children, as they sit, to currents of air.

6. In cold weather, attend to the stove, or other mode of heating ; and take care that the children are never allowed to sit so long as to become chilled.

7. Endeavour to command the children by a look ; and see that your hand-bell receives instant attention.

8. When the children are in the gallery, place yourself so as to speak to, and receive the attention of, the whole at once ; and do not permit any portion or individual to keep silence, or remain motionless, when all are expected to answer, speak, sing, or move.

9. Never punish in anger ; nor give to your punishment the least taint of vengeance.

10. In quarrels and battles, when they arise, spare no pains in investigating the truth, and acting accordingly.

11. Never overlook a fault.

12. Never break a promise.

13. Be clear and precise in your own expressions.

14. Let your own example in every thing be worthy of imitation ; for the minds and manners of the children will necessarily be modelled on yours. Self-government, temper, kindness, order, cleanliness, politeness, cheerfulness, and activity, ought, in yourself, to be constantly exemplified.

15. Never attempt to teach that which you yourself do not thoroughly understand.

16. Never frighten children by confinement in the dark, goblins, or threats that the sweep or other terrible person will '*take them* ;' on the contrary, remove every ground of fear, superstitious and of every other kind, except the fear of doing amiss. Explain every thing which might cause terror, and show it to be harmless.

17. Impress on the children the necessity of attending to *your* directions as their rule ; and never present to them as a motive to good conduct to please a particular lady or gentleman. Lead them to act rightly from a sense of duty, and to avoid doing wrong from abhorrence of evil.

18. Most carefully avoid favouritism, or even the appearance of it.

19. Watch the idlers, and show them that they do not escape your eye.

20. Let no day pass without a narrow look at each child for symptoms of disease ; and when these are detected, or even suspected, send the child home, till he can return with safety to himself and the rest.\*

21. Seize every opportunity of self-improvement at your leisure hours, by reading and attending lectures on science and literature, when within your reach, and observing Nature in all her varieties. Take parties of the children short walks with you, and point out to them instructive matters of observation within their grasp of mind.

22. Be possessed, for your own use, of the latest edition of Wilderspin's *Infant System*, upon which this treatise is based.† Make yourselves completely masters of its contents ; and never suffer any supposed improvement of your own to supersede the *fundamental principles* of that system. Details may, and do vary in different schools ; for example, pictures, verses, hymns, lessons, &c. ; but the system which nearly twenty years has proved to be according to nature, it were equally unwise and conceited to change.

\* See Appendix, No. II.

† The sixth edition is dated 1834. It is scarcely a good *moral* example to publish, as is often done, books on Infant Training, not only adopting Mr Wilderspin's whole plan, but his lessons, verses, &c., without even once mentioning his name.



## RULES FOR THE SCHOOL.

Of these, each parent should receive a copy on card, to be hung up at home.

1. Each child to pay weekly, which must be paid every Monday morning. When two or more children belong to one family, one-half weekly will be required for each additional child.

2. Children shall not be admitted before they are two years of age, nor after five years of age, nor remain longer than seven.

3. No child shall be admitted who has any infectious disease, or who may not have been vaccinated, or have had the smallpox.

4. Parents must send their children with hands, face, and neck clean, their hair cut short and combed, and their clothes as clean and decent as possible, otherwise they will be sent home to be washed or cleaned.

5. The hours of attendance to be, in the summer half-year from the 1st March to the 1st October, as follows: The school to open at half-past nine, and exercise to begin at ten precisely, and to continue till five, with an interval of one hour from one to two for dinner; and in the winter half-year, to commence at the same time, and to continue till three, with half an hour interval for dinner. The children to be at liberty to bring their dinner, and remain within the premises till the school recommences.

6. The children absent three days, or late in coming to school for one week without leave, or a satisfactory excuse, shall forfeit their right of attendance.

7. Persons wishing to visit the school will be admitted on . . . . . No individual to be admitted at any other time, except the visitors appointed to attend in rotation, or such as have permission from . . . . .

## SECTION III.

## INFANT SCHOOL CLASSIFICATION—MONITORS—ARRANGEMENTS—LESSONS AND EXERCISES—REWARDS AND PUNISHMENTS.

After a week or two the teacher will have observed the characters of the children, and may select as many of them to act as monitors as will furnish a monitor to every five children ; which five children will form a class. The monitors will be chosen, *every day*,\* from their intelligence, aptness, and steadiness ; and each will be impressed with the nature and duties of his (or her) office, and with his responsibility for the attendance, cleanliness, good order, conduct, and proficiency of his class for that day. A particular portion of the seats round the hall will be allotted to each class ; and on a paper or pasteboard hung over the space, the names of the pupils of the class should be distinctly written. Each child will thus know its place in the room, and, when once exercised in it, its place in the gallery. Immediately over the place of each class, there will be a pin for every hat or bonnet belonging to that class, and a small canvass bag for such as bring their dinner, that they may deposit it safely till the school interval. As soon as possible commence the monitors with THE LESSON POSTS already described. When each monitor has mastered the first lesson, let him (or her) march the class he has charge of, and having arranged

\* This daily nomination of monitors has been found by Mr Milne of the Edinburgh Model School to work unexceptionably, and indirectly to create many more monitors, well qualified, than when the office is fixed. Mr Wilderspin, in his work, complains that his monitors tire and give up their appointments ; and he finds it necessary to bribe them by paying each a penny a-week. This recourse is much to be regretted. Mr Milne renders the daily appointment a reward and pleasure, and has no want of volunteers.

them in a curve in front of the board, the curve being marked by chalk or brass nails in the floor, let him place his own stool within the circle, and with a short piece of cane as a pointer, point out to the class the lesson he has learned, the children repeating it after him till they are master of it. It may be the letters of the alphabet, or syllables or words, or it may be pictures of objects, as the horse, ass, zebra, cow, sheep, goat, &c. &c. ; or on another board, the fishmonger, mason, hatter, cooper, butcher, blacksmith, &c. Encourage the monitors to ask questions freely at the pupils, respecting what they read, see, and describe on the lesson boards, and other matters that occur to them. The classes will go on successively to the other lesson posts, till each class has completed the circle. Each monitor will be stationary at his own post. This exercise will occupy a considerable portion of the time of each day. The teacher will take care to have the monitors in advance of their classes in the lessons, and must therefore give them a fair portion of separate instruction. He must, however, most carefully watch the demeanour of the monitor, and repress that conceit and petty tyranny which, even in the infant bosom, a little brief authority is too apt to occasion.

The classes kept at the lesson posts a reasonable time,—*for the infants must never be fatigued or wearied with their studies*,—a quarter of an hour of the open air, and exercise of the playground should succeed, to which they should march in order under their monitors. The teacher and his wife, having opened cross windows for ventilating the hall, will narrowly watch the intercourse in the playground, and will by no means consider *that* as a time for their own relaxation. *There is no relaxation for the teachers during the hours when the children attend at an Infant School.* All tyranny, selfishness, and violence, must be prevented, and the kindest co-operation, accommodation, and civility, recommended and exercised. Protection of the girls by the boys, succour to them in their little accidents and embarrassments, and avoidance of all

quarrels, provocation, teasing, ridicule, nicknames, tricks, blows, violent pushes, unfairness in the turns of occupation of the swings, and quarrelling for the use of the ropes or the bricks, indelicacies, faults against cleanliness, &c. will all be objects of the teacher's observation in the playground. The monitors will keep an eye on the moral conduct, and quietly report faults to the teacher. Indiscriminate complaining should be discouraged, as it often comes from spite and revenge. The teachers will occasionally join in the sports, encourage the gentle and timid, and teach the bolder to bring them forward; and if any child is weak in body, or defective in mind, make it the object of care and help, instead of ill usage and oppression.\*

## GALLERY EXERCISE.

The teacher will now ring his hand-bell for school, directing the whole to range themselves in their *known* places in the gallery. Here all the *simultaneous* exercises and feats are performed.

*Manual Exercise.*—Gain the general attention by a few rounds of what may be called the manual exercise. The whole rise up at one moment by word of command—sit down—rise again—face right, left, about—hands up, down, forward, behind, up again, fingers opened, moved, hands clapped in time, or to a tune sung or played by the teacher, and when they have learned to sing, accompanied by the children. When all is still again, (and the tinkle of the bell should be *instantly* obeyed, and produce the utmost stillness, whatever is going on,) a course of gallery exercise will commence, in which those things will be taught in succession, which all can take directly from the teacher's descriptions, illustrations, demonstrations, and exhibitions. For example, the hours on the clock are to be named:—the

\* See an instance in the Appendix, No. I.

face of a clock with moveable hands is placed opposite to the whole gallery, on which the teacher moves the hour and minute hands, and shows the effect of both movements. This he does again and again, till he finds some of the children can name the hour at which he places the hands ; and he will soon find they all can do so. A monitor who is perfect at the particular lesson, such as the clock, will now be placed on the rostrum and go through the exercise, all the *gallery* attending to him and repeating the words after him,—the teacher watching narrowly that the monitor has the attention of *every* individual, and that *every* individual repeats the words. This is a momentous point of attention, the slightest listlessness in a child passed over, will soon become a habit, and all improvement of that child is at an end. The teacher should set a monitor on the rostrum as often as possible ; the saving to his lungs will be soon appreciated by him. The arithmeticon will be taught to the whole school in the gallery. It will be placed on the rostrum, and the balls shifted by the teacher, but as soon as possible by the monitors in succession. It is needless to enumerate all the gallery lessons ; it will be quite obvious, that wherever exhibition of *objects, drawings, models, maps, mathematical figures*, either drawn or constructed by the gonigraph, is to be made, they are best made to the whole school at one and the same moment, assembled in the gallery. Of course all the Mayo lessons will be given to the children in the gallery. *Singing* will be taught to the children in the gallery ; and as in this stage of education it must be taught entirely by the ear, the natural method is to impress the air to be taught on the musical memory of the children, by playing or singing it several times over every day for several days, before the children are permitted to join in it. Then name a few who are quick in taking up a musical air, and let them sing it along with the teacher, and also by themselves—all in the hearing of the rest ; allow a few more of the elder children to join, till at last the whole may try it ; and the teacher will find,

if he himself has a just ear and clear musical enunciation, that a short time is enough for the whole school. Mr Wilderspin found, by experience, that it is rare indeed that a child cannot be taught to join in singing. Of course it is important to sing both words and tune together, as some persons find this difficult. It is a good practice to make the children repeat the words before singing them. These are taught, *line by line*, by a monitor on the rostrum, the whole children repeating each line after him. Many of the lessons are sung by the children, such as the *pence table*, *weights and measures table*, &c. ; these will be given entire in the sequel. All this is done in the gallery ; yet it often amuses the children to sing their little rhymes as they march, keeping time with hands and feet to the music.

The teacher never can go wrong by a sudden appeal to the *manual exercise*, when attention is flagging or drowsiness coming on,—the latter a very common occurrence, especially in hot weather. The children are always delighted to spring to their feet, and go through such exercises.

EXAMPLE OF A WEEK'S COURSE, NEARLY AS PRACTISED BY  
MR WILDERSPIN.

*Morning School* from o'clock to

*Afternoon Ditto* from o'clock to

Each monitor (of the preceding day) to examine in the morning the face, hands, and clothes of each child in his class, and bring out any that are unwashed, or otherwise dirty, to be inspected by the teacher, and, if he thinks it proper, sent home to be cleaned.

Children to assemble in the gallery.

*Morning and Afternoon*.—A hymn sung, of which examples will be found in the Appendix, No. V. The Lord's Prayer repeated solemnly with shut eyes and folded hands.

## MONDAY.

*Morning.*—Lessons and spelling at the lesson posts. At half-time, play for half-an-hour. Gallery lessons on objects. Lessons on pictures; these, as soon as possible, given by the monitor on the rostrum. Repeated manual exercise and singing.

*Afternoon.*—Picture lessons on Scripture history at lesson posts. Examination on these, with Scripture stories in the gallery. Manual exercise. Anecdote told elliptically.

## TUESDAY.

*Morning.*—After devotions, letters and spelling at the posts. Play. Gallery. Addition and subtraction with the arithmeticon.

*Afternoon.*—Multiplication table, by arithmeticon. Monitor asking the question, and the children answering. Reading lessons. Play. Gallery. Numeration and spelling with moveable letters. Lessons on objects.

## WEDNESDAY.

*Morning.*—Letters and spelling, or coloured engravings at posts. Play. Gallery. Geometrical figures with goniograph. Lessons on objects. Manual exercise. Singing.

*Afternoon.*—Pence tables. Play. Gallery. Arithmeticon, by teacher. Lessons on objects. Manual exercise. Singing.

## THURSDAY.

*Morning.*—Lessons and spelling. Play. Gallery. Division. Weights, measures, and time, from the rostrum. Same lessons as Monday morning.

*Afternoon.*—Pictures at the posts. Play. Gallery. Letters and figures. Lessons on objects. Manual exercise. Singing.

## FRIDAY.

*Morning.*—Letters and spelling. Arithmetic. Play. Gallery. Lessons in geography and history. Maps. Globes. Singing.

*Afternoon.*—Scripture pictures at posts. Play. Examination in gallery. Lessons on objects. Anecdotes elliptical. Manual exercise.

## SATURDAY.

*Morning.*—Letters and spelling. Arithmetic from the rostrum. Play. Gallery. Gonigraph. Objects.

N.B.—Religious instruction every day introduced, so as to interest the feelings and gratify the children. The teacher of course may vary the above lessons as the children advance. It is a sort of guide as to the method, but by no means exhausts the studies and exercises of an Infant School. Examples of various lessons will be given in the sequel.

Mr Milne, of the Edinburgh Model School, has furnished the following specimen of the work of a week.

WEEKLY ARRANGEMENT OF LESSONS IN THE EDINBURGH  
MODEL INFANT SCHOOL.

## MONDAY.

*Sacred Hymn.*—Spared to begin another week.\*

\* In some schools, religion is introduced more or less prominently than in this. The present arrangement of lessons is presented as one which has proved successful in one school of respectable character; but, of course, individuals who may consult our volume for directions respecting the establishment of other schools, will conceive themselves at liberty to present both the morality and the doctrines of Christianity in such forms and extent as may seem to them most proper.



*Prayer.*

*Lessons.*—Reading and spelling.

*Moral Hymn.*—When a foolish thought within.

*Card Lesson.*—Mental reduction.

*Multiplication.*—2d and 7th lines.

*Scientific Hymn.*—The organ of the sense of sight.

*Conversation.*—On the senses.

*Numeration.*—2, 3, and 4 figures.

*Zoology.*—Quadrupeds.

*Nat. Hist. Rhyme.*—The cat is kept about the house.

or—The ass a humble patient drudge.

or—When any would the dog describe.

*Classification.*—Of objects.

*Horology.*—What o'clock is it?

*Scrip. Lesson.*—History of a prophet.

*Moral Hymn.*—Thou shalt have no more gods but me.

or—How brittle is glass.

*Tables.*—Pence, shilling, money.

*Objects.*—Structure, &c.

*Picture Lessons.*—Marked for Monday.

*Sacred Hymn.*—Lord, I have pass'd another day.

*Prayer.*

*Dinner Hymn.*—Father of all! we bow to thee.

#### TUESDAY.

*Sacred Hymn.*—Holy Saviour, now before thee.

*Prayer.*

*Lessons.*—Reading and spelling.

*Moral Hymn.*—While many from place unto place.

*Card Lesson.*—£. s. d.

*Multiplication.*—3d and 8th lines.

*Scien. Hymn.*—The sun the great exhaustless source.

*Conversation.*—On astronomy.

*Notation.*—Roman characters.

*Zoology.*—Birds.

*Nat. Hist. Rhyme.*—There is a bird of plumage rare.

*or*—A thousand birds of joyous tone.

*or*—Welcome, welcome, feathered stranger.

*Use of Words.*—Implying number.

*The Kings.*—Of England.

*Scrip. Lesson.*—Stories of children.

*Moral Hymn.*—School is a pleasure.

*or*—The children of an Infant School.

*Tables.*—Of weight, said and sung.

*Objects.*—Atmospheric kingdom.

*Picture Lessons.*—Marked for Tuesday.

*Sacred Hymn.*—Our God is present every-where.

*Prayer.*

*Dinner Hymn.*—O Lord! the mercies of thy hand.

#### WEDNESDAY.

*Sacred Hymn.*—My Father, I thank thee for sleep.

*Prayer.*

*Lessons.*—Reading and spelling.

*Moral Hymn.*—We ought to have our ears engaged.

*Card Lesson.*—The sciences.

*Multiplication.*—4th and 9th lines.

*Scientific Hymn.*—The wondrous globe on which we dwell.

*Conversation.*—On the atmosphere.

*Numeration.*—5, 6, 7, 8, and 9 figures.

*Zoology.*—Fishes.

*Nat. Hist. Rhyme.*—

*Grammatical Ring.*—The pronouns.\*

*The Tour.*—The capitals of Europe.

\* The *ring* is a circle formed of the children and other objects, round which a child goes, and names the parts of speech, in the existence of the objects, and their relations to each other, and to his own actions.

*Scrip. Lesson.*—Beautiful texts.

*Moral Hymn.*—Nor bird nor beast should we molest.

or—Now in the Infant School.

*Tables.*—Of measure, (lineal.)

*Objects.*—Mineral kingdom.

*Picture Lessons.*—Marked for Wednesday.

*Sacred Hymn.*—Lord, dismiss us with thy blessing.

*Prayer.*

*Dinner Hymn.*—Lord, I would own thy tender care

#### THURSDAY.

*Sacred Hymn.*—Thou God of love and mercy, hear.

*Prayer.*

*Lessons.*—Reading and spelling.

*Moral Hymn.*—The love of our parents we know.

*Card Lesson.*—Weights and measures.

*Multiplication.*—5th and 11th lines.

*Scien. Hymn.*—Behold the sun that shines so bright.

*Conversation.*—On geometry.

*Notation.*—Roman characters.

*Zoology.*—Insects.

*Nat. Hist. Rhyme.*—Who taught the bird to build ?

or—How doth the little busy bee.

or—In thousand species of the insect  
kind.

*Grammar.*—First steps in parsing.

*Zones of the Globe.*—Peculiarities.

*Scrip. Lesson.*—Remarkable places.

*Moral Hymn.*—To do to others as I would.

or—Happy, happy, is the time.

*Tables.*—Of time.

*Objects.*—Vegetable kingdom.

*Picture Lessons.*—Marked for Thursday.

*Sacred Hymn.*—O God! another day is flown.

*Prayer.*

*Dinner Hymn.*—The Lord's my shepherd, I'll not  
want.

## FRIDAY.

*Sacred Hymn.*—Our infant voices, Lord, attune.

*Prayer.*

*Lessons.*—Reading and spelling.

*Moral Hymn.*—If we should ever have a dog.

*Card Lesson.*—The miracles of Jesus.

*Multiplication.*—6th and 12th lines.

*Scientific Hymn.*—The surface of the globe.

*Conversation.*—On geography.

*Numeration.*—Trillions, billions, millions.

*Zoology.*—Reptiles, &c.

*Grammar.*—The prepositions illustrated.

*Fractions.*—Of a pound, or of a foot.

*Scrip. Lesson.*

*Moral Hymn.*—Come, let us make it our delight.

*or*—Together we children assemble.

*Tables.*—Of measure, (capacity.)

*Objects.*—Animal kingdom.

*Picture Lessons.*—Marked for Friday.

*Sacred Hymn.*—O God ! how endless is thy love.

*Prayer.*

*Dinner Hymn.*—O, God of Bethel ! by whose hand.

## SATURDAY.

*Sacred Hymn.*—Hosanna to the Son of David.

*Prayer.*

No regular order observed in the other lessons to-day.

*Chant.*—The Bible is the word of God.

*Sacred Hymn.*—Let thy blessing, Lord, attend us.

*Prayer.*

## LESSONS ON OBJECTS.

Of lessons on objects and their utility notice has already been taken. Some specimens may be here presented, in order to convey to intelligent teachers an idea of what they usually consist of, and the manner in which they are conducted. The work of Dr Mayo,\* from which these are extracted, though extremely useful, and by no means expensive, may not readily be obtained by many teachers; but a little ingenuity on the part of the conductors of infant seminaries, will, in a great measure, supply the want, as there is scarcely an object of which the various qualities are not easily appreciable.

LESSON 1.—*Glass*—Glass has been selected as the first substance to be presented to the children, because the qualities which characterise it are quite obvious to the senses. The pupils should be arranged before a black board or slate, upon which the result of their observation should be written. The utility of having the lesson presented to the eyes of each child, with the power of thus recalling attention to what has occurred, will very soon be appreciated by the instructor.

The glass should be passed round the party, to be examined by each individual.†

*Teacher.* What is this which I hold in my hand?

*Children.* A piece of glass.

*Teacher.* Can you spell the word “glass?” (The teacher then writes the word “glass” upon the slate, which is thus presented to the whole class as the subject of the

\* Seeley, London; price three and sixpence. The first four series are fit to be taught in Infant Schools.

† By this means each individual in the class is called upon to exercise his own powers on the object presented; the subsequent questions of the teacher tend only to draw out the ideas of the children, and to correct them if wrong.

lesson.) You have all examined this glass ; what do you observe? What can you say that it is? \*

*Children.* It is bright.

*Teacher.* (Teacher having written the word 'qualities,' writes under it—It is bright.) Take it in your hand, and *feel*† it.

*Children.* It is cold. (Written on the board under the former quality.)

*Teacher.* Feel it again, and compare it with the piece of sponge that is tied to your slate, and then tell me what you perceive in the glass.‡

*Children.* It is smooth—it is hard.

*Teacher.* What other glass is there in the room?

*Children.* The windows.

*Teacher.* Look out at the window, and tell me what you see.

*Children.* We see the garden.

*Teacher.* (Closes the shutter.) Look out again, and tell me what you observe.

*Children.* We cannot see any thing.

*Teacher.* Why cannot you see any thing?

*Children.* We cannot see through the shutters.

*Teacher.* What difference do you observe between the shutters and the glass?

*Children.* We cannot see through the shutters, but we can through the glass.

*Teacher.* Can you tell me any word that will express this quality which you observe in the glass?

\* This question is put instead of asking, "What are its qualities?" because the children would not at first, in all probability, understand the meaning of the term. Its frequent application, however, to the answers to this question, will shortly familiarize them to it, and teach them its meaning.

† The art of the teacher is to put such questions as may lead successively to the exercise of the different senses.

‡ The object of the teacher here is to lead the pupil to the observation of the quality *smooth*; and he does so by making him contrast it with the *opposite* quality in another substance, a mode of suggestion of which frequent use may be made.

*Children.* No.

*Teacher.* I will tell you then ; pay attention that you may recollect it. It is transparent.\* What shall you now understand when I tell you that a substance is transparent ?

*Children.* That you can see through it.

*Teacher.* You are right.† Try and recollect something that is transparent.

*Children.* Water.

*Teacher.* If I were to let this glass fall, or you were to throw a ball at the window, what would be the consequence ?

*Children.* The glass would be broken. It is brittle.

*Teacher.* If I used the shutter in the same manner, what would be the consequence ?

*Children.* It would not break.

*Teacher.* If I gave it a heavy blow with a very hard substance, what would happen ?

*Children.* It would then break.

*Teacher.* Would you therefore call the wood brittle ?

*Children.* No.

*Teacher.* What substances then do you call brittle ?

*Children.* Those which are *easily* broken.

These are probably as many qualities as would occur to children at their first attempt, which being arranged on the slate, form an exercise in spelling. They should then be effaced, and if the pupils are able to write, they may

\* The fact of the glass being transparent, is so familiar to the children, that they will probably not observe it till its great use, in consequence of that quality, brings it forcibly before their minds. They then feel the want of a term to express the idea thus formed, and the teacher gives them the name, as a sign for it, and in order to impress it upon their minds. To ascertain whether they have rightly comprehended the meaning of the word, they are called upon to give examples of its application.

† It is but too common a practice to call a child good because he gives a right answer, thus confounding intellectual truth and moral virtue.

endeavour to remember the lesson, and put it down on their slates.

The following substances, with their qualities and uses, are specimens of the subjects of the other twenty-two lessons of the first series :—

*2d*, INDIA RUBBER.—*Qualities*—Opaque, elastic, inflammable, black, tough, smooth. *Uses*—To rub out pencil marks ; to make balls ; and to render cloth impervious to air and water.

*3d*, LEATHER.—Flexible, odorous, waterproof, tough, smooth, durable, opaque. For shoes, gloves, reins, saddles, portmanteaus ; for binding books.

*4th*, LOAF SUGAR.—Soluble, fusible, brittle, hard, sweet, white, sparkling, solid, opaque. To sweeten our food.

*5th*, A PIECE OF GUM ARABIC.—Hard, bright, yellow, semi-transparent, soluble in water, adhesive when melted, solid. To unite light and thin substances.

*6th*, SPONGE.—Porous, absorbent, soft, tough, opaque, elastic, dull, flexible, light-brown. For washing and cleaning.

*7th*, WOOL.—Soft, absorbent, white, flexible, elastic, tough, durable, opaque, dry, light. For making cloth, flannels, blankets, carpets, stockings, &c.

*8th*, WATER.—Liquid, reflective, glassy, colourless, inodorous, tasteless, transparent, heavy, bright, wholesome, purifying. To cleanse, to fertilize, to drink ; for culinary purposes.

The remaining substances are WAX, CAMPHOR, BREAD, SEALING WAX, WHALEBONE, GINGER, BLOTting PAPER, WILLOW, MILK, RICE, SALT, HORN, IVORY, CHALK, and BARK. For the qualities, it is fair to Dr Mayo to refer



to his own work and for an excellent exposition of the mode of impressing a knowledge of these qualities on the minds of the pupils.

Dr Mayo considers it as a fault to tell the pupils too much. Although pleased, their minds remain passive, and they acquire a habit of receiving impressions from others, instead of exerting their own faculties. He farther never gives a term before the pupil feels the want of it ; it is then when given fixed on the memory.

A second series of lessons, fourteen in number, is thus introduced by Dr Mayo:—In this series the children should be much exercised upon the *qualities* already remarked ; but these should now be presented to them in *other objects*. This repetition combines with the advantage of fixing the knowledge acquired, that of enabling them to form the abstract idea of the quality.

Having had all their senses brought into action, they may be led to determine the *sense* by the exercise of which any particular property was observed. Thus, 'How did you find out that glass was transparent?' 'By my eyes.' 'What can you do with your eyes?' 'See.' '*Seeing* is called a *sense*.' 'Can you obtain an idea of a quality except by the sense of sight?' 'Will your sight discover to you that a rose is odorous?' 'How would you ascertain this quality?' 'By what sense?' 'By smelling.' 'By the sense of smell.' By similar questions the class will gain a clear conception of the several *senses*, and their operations. They may next proceed to the operation of the *organs* of sense. Thus, 'By what natural instrument are you able to see, hear, &c.' 'By eyes, ears, &c. Any natural instrument by which something is performed is called an *organ*. 'What are the eyes?' 'Organs.' 'Organs of what sense?' &c. 'Organs of sight, &c.

It will be an useful exercise for children to classify the various *qualities* which they have observed in objects, under the heads of the different *senses* by which they are discerned. They will soon perceive that some may be

discovered by either of two senses. For example, *fluid*, *solid*, *rough*, and *the varieties of form*, which may be ascertained either by *sight* or *feeling*: these should constitute another division. Thus trained to arrange their ideas, children will acquire a great readiness in making use of their knowledge, and a facility in producing new combinations.

In this series, they may also be practised in distinguishing and naming the *parts* of objects.

*Objects*, each a lesson.—A pin, a cube of wood, an uncut lead pencil, a pen, a wax candle, a chair, a book, an egg, a thimble, a penknife, a key, a cup, a coffee-berry, a pair of scissors.

A third series, in twenty-one lessons, is thus introduced:—In this series, the children may be led to the observation of *qualities* which cannot be discerned merely by the outward senses. Thus, by showing them at the same time wool and woollen cloth, and questioning them as to the difference of the two, they will readily form the ideas of *natural* and *artificial*. In this manner they may be led to remark the distinction between *foreign* and *native*, *exotic* and *indigenous*, *animal*, *vegetable*, *mineral*, &c.

They may now be called upon to give an explanation of the terms they use, assisted by the teacher to trace their derivations. A few explanations, adapted to the capacities of children, are given at the end of the volume.

*Objects*, one to each lesson.—A quill, a halfpenny, mustard seed, &c. &c.

A fourth series, in nineteen lessons, is thus introduced:—The chief aim proposed in this series is, to exercise the children in arranging and classifying objects; thus developing a higher faculty than that of simply observing their qualities. The complex operation of connecting things by their points of resemblance, and at the same time of distinguishing them individually by their points of dissimilarity, is one of the highest exercises of our reason. Yet it may be carried on in children at a much earlier period than is usually imagined, if they

are trained to arrange their ideas. With this view, the spices have been chosen, as forming a connected series of objects. The metals, liquids, different kinds of wood, grains, &c. are good subjects for similar lessons.

The children may now be led to consider more fully the senses themselves, having already determined by which of them they discover the presence of any quality. The first lesson is drawn out for the use of the teacher; the substance only of the others is given.

*Teacher.* Do you understand how you gained the knowledge of various qualities?

*Children.* By our senses.

*Teacher.* How do you know when a thing is red or blue?

*Children.* By sight.

*Teacher.* If you were blind, could you form a correct idea of colour? Is there any other means of gaining this knowledge?

*Children.* No.

*Teacher.* True; and to ascertain this point, a blind person was once questioned as to what notion he had of scarlet, he said he thought that it must be like the sound of a trumpet. It is obvious he had no correct idea of a quality discoverable by the sight, and he could only compare it with one that he had acquired through the medium of another sense. Can you tell me the reason why persons born deaf cannot speak?

*Children.* They cannot imitate sounds, because they never heard any.

*Teacher.* Since then deaf persons have no correct ideas of sound, nor blind persons of colour, how did we acquire them?

*Children.* By means of the senses of seeing and hearing.

*Teacher.* How then do you suppose our minds become stored with ideas?

*Children.* By the exercise of our senses.\*

\* It is probable that children would not at once arrive at this

*Teacher.* Now, if you have once had the idea of a dog formed in your mind, by seeing such an animal, when a dog is mentioned you can recall the idea, and fancy one immediately, as if it were present; your mind will also perform the same operation when a quality is spoken of which you had previously seen in some object. Again, if you see a dog unlike any you have observed before, you compare it with the species with which you are acquainted, and mark the difference between them. If I say that I have some green paper, cannot you immediately imagine the colour of which I speak?

*Children.* Yes.

*Teacher.* Did you then exercise your sight?

*Children.* No.

*Teacher.* How then could you have the idea of green?

*Children.* We remembered it.

*Teacher.* By what means did you first obtain the idea?

*Children.* By seeing something green.

*Teacher.* What power of the mind do you exercise in recalling an idea?

*Children.* Our memory.

The lessons which follow are on feeling, or touch, hearing, smell, taste. The Spices, as pepper, nutmeg, mace, cinnamon, &c. Liquids.

#### LESSONS ON OBJECTS, BY MR WILDERSPIN.

As it is our object (says Mr Wilderspin) to teach the children from objects in preference to books, I will mention a method we adopt for the accomplishment of this purpose. It consists of a number of boards, of which, and of their use, the following description will convey an accurate idea.

The boards are about sixteen inches square, and a

conclusion. The teacher must, in that case, lead them to it by easy questions.

quarter of an inch thick: wainscot is the best, as it does not warp. These will go into the groove of the lesson post: there should be about twenty articles on each board, or twenty-five, just as it suits the conductors of the school; there should be the same quantity of things on each board, in order that all the children may finish at one time; this will not be the case, if there be more objects on one board than another. I will give an account of a few of our boards, and that must suffice, or I shall exceed the limits I have prescribed to myself.

The first board contains a small piece of gold in its rough state, a piece of gold in its manufactured state, a piece of silver in both states, a piece of copper in both states, a piece of brass in both states, a piece of iron in both states, a piece of steel in both states, a piece of tin-foil, a piece of solder, a screw, a clasp nail, a clout nail, a hob nail, a spike nail, a sparable, and a tack.

These articles are all on one board, and the monitor puts his pointer to each article, and tells his little pupils their names, and encourages them to repeat the names after him. When they finish at one post they go to the next.

The next board may contain a piece of hemp, a piece of rope, a piece of string, a piece of bagging, a piece of sacking, a piece of canvass, a piece of hessian, a piece of Scotch sheeting, a piece of unbleached linen, a piece of bleached linen, a piece of diaper linen, a piece of dyed linen, a piece of flax, a piece of thread, a piece of yarn, a piece of ticking, a piece of raw silk, a piece of twisted silk, a piece of wove silk, figured, a piece of white plain silk, and a piece of dyed silk, a piece of ribbon, a piece of silk cord, a piece of silk velvet, &c.

The next may contain raw cotton, cotton yarn, sewing cotton, unbleached calico, bleached calico, dimity, jean, fustian, velveteen, gauze, nankeen, gingham, bed furniture, printed calico, marseilles, flannel, baise, stuff, woollen cloth and wool, worsted, white, black, and mixed.

The next may contain milled board, paste board, Bristol

card, brown paper, white paper of various sorts, white sheep skin, yellow sheep, tanned sheep, purple sheep, glazed sheep, red sheep, calf skin, cow hide, goat skin, kid, seal, pig leather, seal skin, wash leather, beaver, &c.

The next may contain about twenty-five of those wood animals which are imported into this country, and are to be had at the foreign toy warehouses ; some of them are carved exceedingly well, and appear very like the real animals.

The next may contain mahogany, and the various kinds of wood.

The next may contain prunings of the various fruit trees.

The next may contain the different small articles of ironmongery, needles, pins, cutlery, small tools, and every other object that can be obtained small enough for the purpose.

The lessons are to be put in the lesson post the same as the picture lessons ; and the articles are either glued or fastened on the boards with screws or waxed thread.

I would have dried leaves provided, such as an oak leaf, an elm leaf, an ash leaf, &c. &c. The leaves of evergreens should be kept separate. These will enable a judicious instructor to communicate a great variety of valuable information.

The utility of this mode of teaching must be obvious, for if the children meet with any of those terms in a book which they are reading, they *understand them immediately*, which would not be the case unless they had seen the *object*. The most intellectual person would not be able to call things by their *proper names*, much less describe them, unless he had been taught, or heard some other person call them by their right names ; and we generally learn more by mixing with society, than ever we could do at school ; these sorts of lessons persons can make themselves, and they will last for many years, and help to lay a foundation for things of more importance.

## LESSONS ON WORDS CONNECTED WITH THINGS, AND TEACHING THE ALPHABET, BY MR WILDERSPIN.

Our next endeavour is to teach the children to express their thoughts upon things ;—and if they are not checked by injudicious treatment, they will have some on every subject. We first teach them to express their *own notions*—we then tell them ours—and truth will prevail, even in the minds of children. On this plan it will operate by its own strength, not by the power of coercion, which renders even truth disagreeable and repulsive. The children will adopt it from choice in preference to error, and it will be firmly established in their minds.

It will no doubt be perceived, that for the promotion of the course here recommended, it will be advisable to connect with our *alphabetical* and *reading lessons*, as much information as we possibly can. By so doing the tedium of the task to the child will be considerably lessened, as well as much knowledge attained. The means of doing this in a variety of ways will, no doubt, suggest themselves to the intelligent teacher ; but, as an illustration of what we mean, the following conversational plan may not be useless,

We have twenty-six cards, and each card has on it one letter of the alphabet, and some object in nature. The first, for instance, has the letter A on the top and an apple painted on the bottom. The children are desired to go into the gallery, which is formed of seats elevated one above another, at one end of the school, like stairs ; the master places himself before the children, so that they can see him, and he them, and being thus situated, proceeds in the following manner :—

Q. Where am I ? A. Opposite to us. Q. What is on the right side of me ? A. A lady. Q. What is on the left side of me ? A. A chair. Q. What is behind me ? A. A desk. Q. Who are before me ? A. We children. Q. What do I hold in my hand ? A. Letter A for apple,

Q. Which hand do I hold it up with? *A.* The right hand. Q. Spell apple.\* *A.* A-p-p-l-e. Q. How is an apple produced? *A.* It grows on a tree. Q. What part of the tree is in the ground? *A.* The root. Q. What is that which comes out of the ground? *A.* The stem. Q. When the stem grows up straight, what would you call its position? *A.* Perpendicular. Q. What are on the stem? *A.* Branches. Q. What are on the branches? *A.* Leaves. Q. Of what colour are they? *A.* Green.

Q. Is there any thing besides leaves on the branches? *A.* Yes; apples. Q. What was it before it became an apple? *A.* Blossom. Q. What part of the blossom becomes fruit? *A.* The inside. Q. What becomes of the leaves of the blossom? *A.* They fall off the tree. Q. What was it before it became blossom? *A.* A bud. Q. What caused the buds to become larger, and produce leaves and blossom? *A.* The sap. Q. What is sap? *A.* A juice. Q. How can the sap make the buds larger? *A.* It comes out of the root and goes up the stem. Q. Where next? *A.* Through the branches into the buds. Q. What do the buds produce? *A.* Some buds produce leaves, some blossoms, and some a shoot. Q. What do you mean by a shoot? *A.* A shoot is a young branch, which is green at first, but becomes hard by age. Q. What part becomes hard first? *A.* The bottom.

### B.

Q. What is this? *A.* B, for baker, for butter, for bacon, for brewer, for button, for bell, &c. &c. [The teacher can take any of these names he pleases, for in-

\* It is not supposed that all or many of the children will be able to spell this, or the subsequent words, or to give such answers as we have put down, but some amongst the older or more acute of them will soon be able to do so, and thus become instructors of the rest. It may be proper to mention, also, that the information on natural history, &c. &c. displayed in some of the answers, is the result of the instructions in natural history, which the children simultaneously receive.



stance, the first:] Children, let me hear you spell baker. *A.* B-a-k-e-r. *Q.* What is a baker? *A.* A man who makes bread. *Q.* What is bread made of? *A.* It is made of flour, water, yeast, and a little salt. *Q.* What is flour made of? *A.* Wheat. *Q.* How is it made? *A.* Ground to powder in a mill. *Q.* What makes the mill go round? *A.* The wind, if it is a windmill. *Q.* Are there any other kinds of mills? *A.* Yes; mills that go by water, mills that are drawn round by horses, and mills that go by steam. *Q.* When the flour and water and yeast are mixed together, what does the baker do? *A.* Bake them in an oven. *Q.* What is the use of bread? *A.* For children to eat. *Q.* Who causes the corn to grow? *A.* Almighty God.

## C.

*Q.* What is this? *A.* It is letter C for cow, c-o-w, and for cat, &c. *Q.* What is the use of the cow? *A.* The cow gives us milk to put into the tea. *Q.* Is milk used for any other purpose besides putting it into tea? *A.* Yes; it is used to put into puddings, and for many other things. *Q.* Name some of the other things? *A.* It is used to make butter and cheese. *Q.* What part of it is made into butter? *A.* The cream, which swims on the top of the milk. *Q.* How is it made into butter? *A.* It is put into a thing called a churn, in the shape of a barrel. *Q.* What is done next? *A.* The churn is turned round by means of a handle, and the motion turns the cream into butter. *Q.* What is the use of butter? *A.* To put on bread, and to put into pie-crust, and many other nice things. *Q.* Of what colour is butter? *A.* It is generally yellow. *Q.* Are there any other things made of milk? *A.* Yes, many things; but the principal one is cheese. *Q.* How is cheese made? *A.* The milk is turned into curds and whey, which is done by putting a liquid into it called rennet. *Q.* What part of the curd and whey is made into cheese? *A.* The curd, which is

put into a press ; and when it has been in the press a few days, it becomes cheese. Q. Is the flesh of the cow useful ? A. Yes ; it is eaten, and is called beef ; and the flesh of the young calf is called veal. Q. Is the skin of the cow or calf of any use ? A. Yes ; the skin of the cow is manufactured into leather for the soles of shoes. Q. What is made with the calf skin ? A. The top of the shoe, which is called the upper-leather. Q. Are there any other parts of the cow that are useful ? A. Yes ; the horns, which are made into combs, handles of knives, forks, and other things. Q. What is made of the hoofs that come off the cow's feet ? A. Glue, to join boards together. Q. Who made the cow ? A. Almighty God.

## D.

Q. What is this ? A. Letter D, for dog, for dove, for draper, &c. Q. What is the use of the dog ? A. To guard the house, and keep thieves away. Q. How can a dog guard the house, and keep thieves away ? A. By barking, to wake the persons who live in the house. Q. Is the dog of any other use ? A. Yes ; to draw under a truck. Q. Does he do as his master bids him ? A. Yes ; and knows his master from any other person. Q. Is the dog a faithful animal ? A. Yes, very faithful ; he has been known to die of grief for the loss of his master. Q. Can you mention an instance of the dog's faithfulness ? A. Yes ; a dog waited at the gates of the Fleet prison for hours every day for nearly two years, because his master was confined in the prison. Q. Can you mention another instance of the dog's faithfulness ? A. Yes ; a dog lay down on his master's grave in a churchyard in London for many weeks. Q. How did the dog get food ? A. The people who lived near noticed him, and brought him victuals. Q. Did the people do any thing besides giving him victuals ? A. Yes ; they made a house for him, for fear he should die with wet and cold.

Q. How long did he stay there? A. Until the people took him away, because he howled dreadfully when the organ played on Sundays. Q. Is it right to beat a dog? A. No; it is very wrong to use any animal ill, because we do not like to be beaten ourselves. Q. Did Almighty God make the dog? A. Yes; and every thing else that has life.

## E.

Q. What letter is this? A. E, for egg. Q. What is the use of an egg? A. It is useful for many purposes; to put into puddings, and to eat by itself. Q. Should country children keep an egg if they find it in the hedge? A. No, it is thieving; they should find out the owner and take it home. Q. Do children ever throw stones at the fowls? A. Yes; but they are mischievous children, and perhaps do not go to school. Q. What ought children to learn by going to school? A. To be kind and good to every body, and every thing that has life.

## F.

Q. What letter is this? A. Letter F, for frying-pan, for father, &c. Q. Let me hear you spell frying-pan. A. F-r-y-i-n-g p-a-n. Q. What is the use of the frying-pan? A. To fry meat and pancakes. Q. Spell me the names of the different kinds of meat. A. B-e-e-f, p-o-r-k, v-e-a-l, m-u-t-t-o-n, l-a-m-b, h-a-m, &c. Q. Of what shape are frying-pans? A. Some circular, and some are like an ellipsis.\* Q. Are there any other uten-

\* It may possibly strike some of my readers as strange that a geometrical question should be put in a conversation on the alphabet, but it should be remembered that, according to the Infant School system, *language* is not taught exclusively, but in connexion with *number* and *form*;—questions like the above, therefore, are calculated to excite their memories, and induce an application of their geometrical knowledge.

sils into which meat is put that are circular? *A.* Yes, please sir, my mother has some circular plates; and please sir, my mother has some elliptical dishes. *Q.* Any thing besides? *A.* Yes, please sir, my mother has a circular table; and, please sir, my mother has a rectangular one, and it is made of deal.

## G.

*Q.* What letter is this? *A.* Letter G, for goat, for good girl, &c. *Q.* Spell goat. *A.* G-o-a-t. *Q.* What is the use of the goat? *A.* In some countries people drink the goat's milk; and the skin is useful to make the upper-leather of shoes. *Q.* Are goats fond of going into the valleys and low places? *A.* No; they are fond of going up hills and high places. *Q.* If a goat is coming down a high hill which has only one narrow path merely wide enough for one goat to walk on without falling down, and another goat is coming up the same path, what do they do? *A.* The goat that is coming up lies down and lets the other goat walk over him. *Q.* Why does not one of the goats turn round and go back again? *A.* Because there would not be room, and the one which should try to turn round would fall down and be killed.

## H.

*Q.* What letter is this? *A.* Letter H, for horse, for house, &c. *Q.* What is the use of the horse? *A.* To draw carts, coaches, stages, waggons, fire-engines, &c. *Q.* Spell horse, and cart, and coach. *A.* H-o-r-s-e, c-a-r-t, c-o-a-c-h. *Q.* What is the difference between a cart and coach? *A.* A cart has two wheels, and a coach has four. *Q.* Tell me some other difference. *A.* The horses in a cart go before each other, but the horses in a coach go side by side. *Q.* What is the use of a fire-engine? *A.* To put the fire out when the house is on fire. *Q.* Is it right for children to play with the fire. *A.* No, very

wrong ; as many children are burnt to death, and many houses burnt down from it. Q. Should the horse be cruelly used? A. No ; he should be kindly treated, as he is the most useful animal we have. Q. Who created him? A. Almighty God.

## I.

Q. What letter is this? A. Letter I, for iron, for idleness, &c. Q. Spell iron. I-r-o-n. Q. What is the use of an iron? A. To iron the clothes after they are washed, and to make them smooth. Q. How do they iron the clothes? A. Make the iron hot, and then work it backwards and forwards on the clothes. Q. Should little children come with clean clothes to school? A. Yes ; and clean hands and faces too. Q. Is not iron used for other purposes? A. Oh, yes ; for a great many things, as knives, forks, &c.

## J.

Q. What letter is this? A. J, for jug, John, &c. Q. What is the use of the jug? A. To hold water, or beer, or any other liquid. Q. What is a jug made of? A. Of clay, which is worked round into the shape of a jug, and then burnt, and that hardens it. Q. Should children be careful when they are carrying a jug? A. Yes ; or else they will let it fall and break it. Q. Then it is necessary for children to be careful? A. Yes, every body should be careful.

## K.

Q. What letter is this? A. Letter K, for kite, &c. Q. What is the use of the kite? A. For little children to fly. Please, sir, my big brother has got a kite. Q. What does your brother do with his kite? A. Please, sir, he goes into the fields when he has got time, and flies

it. Q. How does he fly it? A. Please, sir, he has got a long string, which he fixes to another called a loop, and then he unwinds the string, and gets some boy to hold it up. Q. What then? A. Please, sir, then he runs against the wind, and the kite goes up. Q. What is the use of the tail of the kite? A. Please, sir, it will not fly without a tail. Q. Why not? A. Please, sir, it goes round and round without a tail, and comes down. Q. Then what do you suppose is the use of the tail? A. Please, sir, I don't know. Another child will probably supply the answer. Please, sir, to balance it.

## L.

Q. What letter is this? A. Letter L, for lion, &c. Q. Spell lion. A. L-i-o-n. Q. What is the size of a full grown lion? A. A full grown lion stands four feet and a half high, and is eight feet long. Q. How high do you stand? A. Please, sir, some of us stand two feet, and none of us above three. Q. Has the lion any particular character among beasts? A. Yes, he is called the king of beasts on account of his great strength. Q. When he seizes his prey, how far can he leap? A. To the distance of twenty feet. Q. Describe some other particulars concerning the lion. A. The lion has a shaggy mane, which the lioness has not. Q. What other particulars? A. The lion's roar is so loud that other animals run away when they hear it. Q. Where are lions found? A. In most hot countries: the largest are found in Asia and Africa.

## M.

Q. What letter is this? A. Letter M, for Monday, for mouse, &c. Q. What is the use of the mouse? A. To make the servants diligent, and put the things out of the way. Q. How can mice make servants diligent? A. If people don't put the candles in a proper place the

mice will gnaw them. Q. Are mice of any other service? A. Please, sir, if the mice did not make a smell, some people would never clean their cupboards out.\*

## N.

Q. What letter is this? A. Letter N, for nut, &c. Q. What is a nut? A. A thing that is hard, and it grows on a tree. Q. What shape is it? A. Something in the shape of a marble. Q. How can it be eaten if it is like a marble? A. Please, sir, it is the kernel that we eat. Q. How are nuts produced? A. They grow on trees.

## O.

Q. What letter is this? A. Letter O, for orange. Q. Of what colour is an orange? A. An orange is green at first, but afterwards becomes of a colour called orange-red. Q. Do they grow in the ground like potatoes? A. No, they grow on trees like apples. Q. Can you tell me any thing in the shape of an orange? A. Yes; the earth on which we live is nearly of that shape. Q. On what part of the earth do we live? A. The surface. Q. What do you mean by the surface? A. The outside. Q. Who formed the earth, and preserves it in its proper motions? A. Almighty God.

## P.

Q. What letter is this? A. Letter P, for pig, for plum-pudding, &c. Q. What is the use of the pig? A. Its flesh is eaten, and is called pork. Q. What is the use of the hair or bristles? A. To make brushes or brooms. Q. What is the use of a brush? A. Some brushes are

\* This answer was given by a child four years old; and immediately afterwards another child called out, "Please, sir, if it were not for bugs, some people would not clean their bedsteads."

to brush the clothes, and others to brush the dirt out of the corners of the room. Q. Does a good servant ever leave the dirt in the corners? A. No, never; a good servant or any clean little girl would be ashamed of it.

Q.

Q. What letter is this? A. Letter Q, for quill, &c. Q. How are quills produced? A. From the wings of geese and other large birds. Q. What is the use of the quill? A. To form into pens and many other things. Q. What is the use of the pen? A. To dip into ink and write with it. Q. What do you write upon? A. Paper. Q. What is paper made of? A. Rags.

R.

Q. What letter is this? A. Letter R, for rabbit, &c. Q. What is the use of the rabbit? A. The flesh of the rabbit is eaten, and is very nice. Q. What does the rabbit eat? A. Corn, grass, cabbage leaves, and many different herbs. Q. What is the use of the skin? A. To make hats, and to trim boys' caps. Q. Are they very numerous? A. They are to be found in almost all countries.

S.

Q. What is this? A. Letter S, for shoe, &c. Q. What is the use of shoes? A. To keep the feet warm and dry. Q. Should children walk in the mud or in the kennel? A. No, because that would spoil the shoes, and wear them out too soon. Q. And why should little children be careful not to wear them out any more than they can help? A. Because our parents must work harder to buy us more.

T.

Q. What letter is this? A. Letter T, for tea-kettle.



*Q.* What are tea-kettles made of? *A.* Some are made of tin, and some of copper, and some of iron. *Q.* Why are they not made of wood? *A.* Because the wood would burn. *Q.* What thing is that at the top? *A.* The handle. *Q.* What is underneath the handle? *A.* The lid. *Q.* What is in the front of it? *A.* The spout. *Q.* What is the use of the spout? *A.* For the water to come out. *Q.* What is the use of the handle? *A.* To take hold of. *Q.* Why do they not take hold of the spout? *A.* Because it is the wrong way.

## U.

*Q.* What letter is this? *A.* Letter U, for umbrella, &c. *Q.* Is letter U a vowel or consonant? *A.* A vowel. *Q.* What is the use of the umbrella? *A.* To keep the rain off any body. *Q.* What are umbrellas made of? *A.* Some of silk and some of cotton. *Q.* Which are the best? *A.* Those that are made of silk. *Q.* Is there any thing else in an umbrella? *A.* Yes; whalebone. *Q.* Where does whalebone come from? *A.* Out of a large fish called a whale. *Q.* Who made the whale? *A.* Almighty God.

## V.

*Q.* What letter is this? *A.* Letter V, for vine, &c. *Q.* What is a vine? *A.* A thing that grows against the wall, and produces grapes. *Q.* Why does it not grow like another tree, and support its own weight? *A.* Because it is not strong enough. *Q.* Then it cannot grow and become fruitful in this country without man's assistance? *A.* No; and please, sir, we cannot grow and become fruitful without the assistance of Almighty God.\*

## W.

*Q.* What letter is this? *A.* It is letter W, for wheel.

\* This answer was given by a child five years of age.

Q. Spell wheel. A. W-h-e-e-l. Q. What is the use of wheels? Q. To make it easier for horses to draw. Q. How do you know that? A. Please sir, I had a little cart full of stones, and the wheel came off; and, please sir, I found it much harder to draw. Q. Then if it was not for wheels, the horse could not draw so great a weight? A. No; and please, sir, people could not go into the country so quick as they do. Q. What trade do they call the persons that make wheels? A. Wheelwrights.

## X.

Q. What letter is this? A. Letter X, for Xenophon, a man's name. Q. What was the particular character of Xenophon? A. He was very courageous. Q. What does courageous mean? A. To be afraid to do harm, but not to be afraid to do good, or any thing that is right. Q. What is the greatest courage? A. To conquer our own bad passions and bad inclinations. Q. Is he a courageous man that can conquer his bad passions? A. Yes; because they are the most difficult to conquer.

## Y.

Q. What letter is this? A. Letter Y, for yoke, &c. Q. Is it a vowel or consonant? A. When it begins a word it is called a consonant, but if not, a vowel. Q. What is a yoke? A. Please sir, what the milk people carry the milk pails on. Q. What is the use of the yoke? A. To enable the people to carry the milk easier.

## Z.

Q. What letter is this? A. Letter Z, for Zealander. Q. What is a Zealander? A. A man that lives on an island on the southern ocean, called Zealand. Q. How do they live? A. Principally by hunting and fishing.

Q. What is hunting? *A.* Following animals to catch them. Q. Who made all the animals? *A.* Almighty God.

Mr Wilderspin never fatigues the children with this or any other lesson. If intermitted for a day or two, they will themselves request to have the picture alphabet in the gallery, &c.

The children are also to be practised on an alphabet, both Roman and Italic, printed in large letters hung up before them. The whole gallery at once.

It is necessary, too, to practise them on the proper sounds of the words they spell, as of *a* in *ball*, *wall*, also in *hat*, *cat*, and *hate*, *late*, or *i*, in *will*, *hill*, *wild*, *child*, &c.

Mr Wilderspin urges the importance, and Mr Milne agrees with him, of the children at an Infant School being taught to read. The parents expect this, as what they are accustomed to consider education. Much may be done without books; indeed they are entirely dispensed with at the Edinburgh Model School, with the exception of a small book or two put into the hands of the more advanced classes.

#### LESSONS IN READING, BY MR WILDERSPIN.

I have arranged a series, denominated "Developing Lessons," the great object of which is to induce children to think and reflect on what they see. They are thus formed: at the top is a coloured picture, or series of coloured pictures of insects, quadrupeds, and general objects. For instance, there is one containing the poplar, hawk-moth, and wasp. The lesson is as follows: "The wasp can sting and fly as well as the moth, which does not sting. I hope no wasp will sting me; he is small, but the hawk-moth is large. The moth eats leaves, but the wasp loves sweet things, and makes a round nest. If

boys take the nest they may be stung : the fish like the wasp grubs." On this, questions are proposed : Which stings ? Which is small, and which large ? Which eats leaves ? Which makes a round nest ? &c. &c.

To take another instance. There is a figure of an Italian, to which is appended the following : "The Italian has got a flask of oil and a fish in his hand, and something else in his hand which the little child who reads this must find out. Any child can tell who makes use of the sense of seeing. In Italy they make a good deal of wine ; big grapes grow there that they make it with. Italians can sing very well, and so can little children when they are taught." Questions are likewise proposed on this, as before.

Of these lessons, however, there is a great variety. All schools should possess them : they will effectually prevent the evil alluded to, by checking the apathy of children in learning to read, and calling the teacher's powers into full exercise. They are equally adapted to spelling and reading.

I will give two specimens of reading lessons in natural history, each of which has a large, well-engraved and coloured plate at the top, copied from nature.

### *The Eagle.*

How glad some poor children would be if they could read about the eagle. He is a big strong bird, and has such great wings, and such long sharp claws, that he can dig them into the lamb, hare, rabbit, and other animals, and thus fly away with them to feed his young ones, and to eat them himself. Eagles make such a large nest on the side of some high rock, where nobody can get at it. There used to be eagles in Wales, and there are some now in Scotland, but very few in England, for they do not like to be where there are many people. *The Almighty gave man dominion over the birds of the air, as well as over the other animals, and as he gave man power*

to *think*, if the eagles become troublesome, men catch them, though they can fly so high; and as the eagle knows this, he likes to keep out of our way, and go into parts of the world where there are not so many people. There are many sorts of eagles; the black eagle, the sea eagle, the bald eagle, and others. They have all strong bills bent down in front, and strong claws. This bird is mentioned in the Bible.

Questions are proposed after this is read, and thus the examination proceeds:—"What is that? An eagle. What sort of a bird is he? He is big and strong. What are those? His feathers. What else are they called? His plumage," &c. &c.

### *The Crocodile.*

I hope you will not put your dirty hands on this picture of the crocodile. The live ones have hard scales on their backs, and so many teeth. They could bite a man's leg off, but there are none in our land, only young ones that sailors bring with them. The crocodile can run fast; those are best off who are out of his way. He lives by the water; he goes much in it; and he can swim well. Young ones come out of eggs, which the old one lays in the sand. Some beasts eat the eggs, or else there would be too many crocodiles. The crocodile can run fast if he runs straight, and those who wish to get out of his way run zigzag, and he takes some time to turn; the poor black men know this, and can get out of his way; but some of them can fight and kill him on the land or in the water. I think the crocodile is mentioned in *Scripture*. Ask your teacher what *Scripture* means. When you learn geography you will know where many of the places are that are mentioned in the Bible, and you will see where the river Nile is. There are so many crocodiles on the banks of that river, that the people are afraid to go alone. How many wonderful animals our great Creator has made! How humble and thankful we should be to see so many great wonders!

On this, questions are asked as before.

The spelling lessons contain words capable of explanation, such as white, black, round, square; others are classed, as fleet, ship, brig, sloop, &c.; and others are in contrast, as hot, cold, dark, light, wet, dry, &c.

#### EXAMPLE OF LESSONS BY PICTURES, SCRIPTURE STORIES, &c.

The pictures should be highly coloured, as such are found very attractive. The natural history pictures will consist of beasts, birds, fishes, insects, flowers, and other objects. The children will of themselves ask what the pictures are, and instruction is never better conveyed than when *this* proof is given that curiosity is excited. There are also pictures of different trades, as shoemakers, builders, weavers. The teacher will take any of the boards on which these pictures are pasted, and explain them minutely to the children. He will require nothing else than his own knowledge and sagacity to do so instructively. Mr Wilderspin recommends a particularly affectionate and encouraging manner in giving lessons on Scripture pictures; he connects the precepts of Christianity with all that is good and kind, and with nothing severe or repulsive. The following are specimens of his method:—

#### *Joseph and his Brethren.*

The picture being suspended against the wall, and one class of the children standing opposite to it, the master repeats the following passages: "And Joseph dreamed a dream, and he told it to his brethren; and they hated him yet the more. And he said unto them, Hear, I pray you, the dream which I have dreamed; for behold, we were binding sheaves in the field, and lo! my sheaf arose and also stood upright; and behold, your sheaves stood round about, and made obeisance to my sheaf."

The teacher being provided with a pointer, will point to the picture, and put the following questions, or such as he may think better, to the children :—

Q. What is this? A. Joseph's first dream. Q. What is a dream? A. When you dream, you see things during the time of sleep. Q. Did any of you ever dream anything?

Here the children will repeat what they have dreamed; perhaps something like the following :—Please, sir, once I dreamed I was in a garden. Q. What did you see? A. I saw flowers, and such nice apples. Q. How do you know it was a dream? A. Because, when I awoke, I found I was in bed.

During this recital the children will listen very attentively, for they are highly pleased to hear each other's relations. The master having satisfied himself that the children, in some measure, understand the nature of a dream, he may proceed as follows :—

Q. What did Joseph dream about first? A. He dreamed that his brother's sheaves made obeisance to his sheaf. Q. What is a sheaf? A. A bundle of corn. Q. What do you understand by making obeisance? A. To bend your body, which we call making a bow. Q. What is binding sheaves? A. To bind them, which they do with a band of twisted straw. Q. How many brothers had Joseph? A. Eleven. Q. What was Joseph's father's name? A. Jacob; he is also sometimes called Israel.

*Master.*—And it is further written concerning Joseph, that he dreamed yet another dream, and told it to his brethren, and said, "Behold, I have dreamed a dream more; and behold the sun and the moon and the eleven stars made obeisance to me."

Q. What do you understand by the sun? A. The sun is that bright object in the sky which shines in the day-time, and which gives us heat and light. Q. What made the sun? A. Almighty God. Q. For what purpose did God make the sun? A. To warm and nourish

the earth, and every thing upon it. Q. What do you mean by the earth? A. The ground on which we walk, and on which the corn, trees, and flowers grow. Q. What is it that makes them grow? A. The heat and light of the sun. Q. Does it require any thing else to make them grow? A. Yes; rain, and the assistance of Almighty God. Q. What is the moon? A. That object which is placed in the sky, and shines in the night, and appears larger than the stars. Q. What do you mean by the stars? A. Those bright objects that appear in the sky at night. Q. What are they? A. Some of them are worlds, and others are suns to give them light. Q. Who placed them there? A. Almighty God. Q. Should we fear and love him for his goodness? A. Yes; and for his mercy towards us. Q. Do you think it wonderful that God should make all these things? A. Yes. Q. Are there any more things that are wonderful to you? A. Yes;—

Where'er we turn our wondering eyes,  
His power and skill we see;  
Wonders on wonders grandly rise,  
And speak the Deity.

Q. Who is the Deity? A. Almighty God.

Nothing can be a greater error than to allow the children to use the name of God on every trifling occasion. Whenever it is necessary, it should, in my opinion, be commenced with Almighty first, both by teacher and scholars. I am convinced, from what I have seen in many places, that the frequent repetition of his holy name has a very injurious effect.

#### *Solomon's Wise Judgment.*

Q. What is this? A. A picture of Solomon's Wise Judgment. Q. Describe what you mean. A. Two women stood before king Solomon. Q. Did the women say any thing to the king when they came before him?



*A.* Yes ; one woman said, O my Lord, I and this woman dwell in one house, and I had a child there, and this woman had a child also, and this woman's child died in the night. *Q.* To whom did the women speak when they said, O my Lord? *A.* To king Solomon. *Q.* What did the woman mean when she said, we dwell in one house? *A.* She meant that they both lived in it. *Q.* Did the woman say any thing more to the king? *A.* Yes ; she said the other woman rose at midnight, and took her son from her. *Q.* What is meant by midnight? *A.* Twelve o'clock, or the middle of the night. *Q.* What did the other woman say in her defence? *A.* She said the live child was hers, and the other said it is mine ; this they spake before the king. *Q.* When the king heard what the women had to say, what did he do? *A.* He said, bring me a sword ; and they brought a sword before the king. *Q.* Did the king do any thing with the sword? *A.* No ; he said, divide the child in two, and give half to the one, and half to the other. *Q.* What did the women say to that? *A.* One said, O my Lord, give her the living child, and in noways slay it ; but the other said, let it be neither mine nor thine, but divide it. *Q.* What took place next? *A.* The king answered and said, Give her the living child, and in nowise slay it, she is the mother thereof. *Q.* What is meant by slaying? *A.* To kill any thing. *Q.* To which woman was the child given? *A.* To the woman that said do not hurt it. *Q.* What is the reason that it was called a wise judgment? *A.* Because Solomon took a wise method to find it out. *Q.* Did the people hear of it? *A.* Yes ; all Israel heard of it, and they feared the king, for they saw that the wisdom of God was in him to do judgment. *Q.* What is meant by all Israel? *A.* All the people over whom Solomon was king. *Q.* If we want to know any more about Solomon, where can we find it? *A.* In the third chapter of the first book of Kings.

*Incidental Conversation.*

Q. Now, my little children, as we have been talking about king Solomon, suppose we talk about our own king; so let me ask you his name? A. King William the Fourth. Q. Why is he called king? A. Because he is the head man, and the governor of the nation. Q. What does governor mean? A. One that governs the people; the same as you govern and manage us. Q. Why does the king wear a crown on his head? A. To denote that he governs from a principle of wisdom, proceeding from love. Q. Why does he hold a sceptre in his hand? A. To denote that he is powerful, and that he governs from a principle of truth. Q. What is a crown? A. A thing made of gold, overlaid with a number of diamonds and precious stones, which are very scarce. Q. What is a sceptre? A. A thing made of gold, and something like an officer's staff. Q. What is an officer? A. A person who acts in the king's name; and there are various sorts of officers, naval officers, military officers, and civil officers. Q. What is a naval officer? A. A person who governs the sailors, and tells them what to do. Q. What is a military officer? A. A person who governs the soldiers, and tells them what to do. Q. What does a naval officer and his sailors do? A. Defend us from our enemies on the sea. Q. What does a military officer and his soldiers do? A. Defend us from our enemies on land. Q. Who do you call enemies? A. Persons that wish to hurt us and do us harm. Q. What does a civil officer do? A. Defend us from our enemies at home. Q. What do you mean by enemies at home? A. Thieves, and all bad men and women. Q. Have we any other enemies besides these? A. Yes; the enemies of our own household, as we may read in the Bible, and they are the worst of all. Q. What do you mean by the enemies of our own household? A. Our bad thoughts and bad inclinations.

Q. Who protects and defends us from these? A. Almighty God. Q. Are there any other kind of officers besides these we have mentioned? A. Yes; a great many more, such as the king's ministers, the noblemen and gentlemen in both houses of parliament, and the judges of the land. Q. What do the king's ministers do? A. Give the king advice when he wants it. Q. And what do the noblemen and gentlemen do in both houses of parliament? A. Make laws to govern us, protect us, and make us happy. Q. After they have made the laws, who do they take them to? A. To the king. Q. What do they take them to the king for? A. To ask him if he will be pleased to approve of them. Q. What are laws? A. Good rules for the people to go by, the same as we have rules in our school to go by. Q. Suppose the people break these good rules, what is the consequence? A. They are taken before the judges, and afterwards sent to prison. Q. Who takes them before the judge? A. A constable, and afterwards he takes them to prison, and there they are locked up and punished. Q. Ought we to love the king? A. Yes; and respect his officers. Q. Do you suppose the king ever prays to God? A. Yes; every day. Q. What does he pray for? A. That God would be pleased to make him a wise and good man, so that he may make all his people happy. Q. What do the Scriptures say about the king? A. They say that we are to fear God and honour the king. A. Who was the wisest king? A. King Solomon. Q. How did he become the wisest king? A. He asked God to give him wisdom to govern his kingdom well; and God granted his request. Q. Will God give our king wisdom? A. Yes; he will give him what is best for him. It says in the Bible, if any man lack wisdom, let him ask of God, for he giveth to all men liberally, and upbraideth not. Q. What is the best book to learn wisdom from? A. The Bible. Q. Is the queen mentioned in the Bible? A. Yes; it is said queens shall be thy nursing mothers. Q. Who came to Solomon besides

the two women? *A.* The Queen of Sheba; she came to ask him questions. *Q.* When he answered her questions, what happened? *A.* The queen was so much delighted with his wisdom, that she gave him a hundred and twenty talents of gold, and spices in abundance. *Q.* How much is one talent of gold worth? *A.* Five thousand, four hundred, and seventy-five sovereigns. *Q.* Did she give him any thing more? *A.* Yes; she gave him precious stones. *Q.* What are precious stones? *A.* Diamonds, jasper, ~~sapphire~~, chalcedony, emerald, sardonyx, sardius, ~~chrysolite~~, beryl, topaz, chrysoprasus, jacinth, ~~amethyst~~. *Q.* Did King Solomon give the Queen of Sheba any thing? *A.* Yes; he gave her whatsoever she desired, besides that which she brought with her. *Q.* Where did she go? *A.* She went away to her own land. *Q.* What part of the Bible is this? *A.* The ninth chapter of the second book of Chronicles. *Master.* The queen is mentioned in other places in the Bible, and another day I will tell in what parts.

### *Natural History.*

When teachers are conversing with their children, they should always take care to watch their countenances, and the moment they appear tired, to stop. An hour's instruction when the children's minds and hearts are engaged, is better than many hours' effort, when they are thinking of something else. In addition to thirty-four pictures of Scripture history, we have sixty of natural history, each picture having a variety of quadrupeds, birds, fishes, and flowers. The first thing we do is to teach the children the names of the different things; then to distinguish them by their forms; and lastly, they are questioned on them as follows:—If the animal is a horse, we put the pointer to it, and say—

What is this? *A.* A picture of a horse. *Q.* What is the use of the horse? *A.* To draw carts, coaches, waggons, drays, fire-engines, caravans, the plough and harrow, boats

on the canals, and any thing that their masters want them. Q. Will they carry as well as draw? A. Yes, they will carry a lady or gentleman on their backs, a sack of corn, or paniers, or even little children, but they must not hit them hard; if they do, they will fall off their backs; besides, it is very cruel to beat them. Q. What is the difference between carrying and drawing? A. To carry is when they have the whole weight on their backs, but to draw is when they pull any thing along. Q. Is there any difference between those horses that carry, and those horses that draw? A. Yes, the horses that draw carts, drays, coal-waggons, stage-waggons, and other heavy things, are stouter and much larger, and stronger than those that carry on the saddle, and are called draught-horses. Q. Where do the draught-horses come from? A. The largest come from Leicestershire, and some come from Suffolk, which are very strong, and are called Suffolk punches. Q. Where do the best saddle-horses come from? A. They came at first from Arabia, the place in which the camel is so useful; but now it is considered that those are as good which are bred in England. Q. What do they call a horse when he is young? A. A foal, or a young colt. Q. Will he carry and draw while he is young? A. Not until he is taught, which is called breaking of him in. Q. And when he is broke in, is he very useful? A. Yes, and please, sir, we hope to be more useful when we are properly taught. Q. What do you mean by being properly taught? A. When we have as much trouble taken with us as the horses and dogs have taken with them. Q. Why, you give me a great deal of trouble, and yet I endeavour to teach you. A. Yes, sir, but before Infant Schools were established, little children like us were running the streets.\* Q. But you ought to be good children if you do run the streets. A. Please, sir, there is nobody to tell us how,† and if the man did not teach the horse, he would not know how to do his work.

\* This answer was given by a child five years of age.

† This answer was given by a child six years of age.

Here we observe to the children, that as this animal is so useful to mankind, it should be treated with kindness. And having questioned them as to the difference between a cart and a coach, and satisfied ourselves that they understand the things that are mentioned, we close, by asking them what is the use of the horse after he is dead, to which the children reply, that its flesh is eaten by other animals (naming them,) and that its skin is put into pits with oak bark, which is called tanning; and that when it is tanned it is called leather; and leather is made into shoes to keep the feet warm and dry, and that we are indebted to the animals for many things that we both eat and wear, and above all to the great God for every thing that we possess. I cannot help thinking, that if this plan were more generally adopted in all schools, we should not have so many persons ascribing every thing to blind chance, when all nature exhibits a God, who guides, protects, and continually preserves the whole.

We also examine the children concerning that ill-treated animal, the ass, and contrast it with the beautiful external appearance of the zebra; taking care to warn the children not to judge of things by their outward appearance, which the world in general are too apt to do, but to judge of things by their uses, and of men by their general character and conduct. After having examined the children concerning the animals that are most familiar to us, such as the sheep, the cow, the dog, and others of a similar kind, we proceed to foreign animals, such as the camel, the elephant, the tiger, the lion, &c. &c. In describing the use of the camel and the elephant, there is a fine field to open the understandings of the children, by stating how useful the camel is in the deserts of Arabia; how much it can carry; how long it can go without water; and the reason it can go without water longer than most other animals; how much the elephant can carry; what use it makes of its trunk, &c. All these things will assist the thinking powers of children, and enlarge their understandings, if managed carefully. We also contrast the beautiful appearance of

the tiger with its cruel and bloodthirsty disposition, and endeavour to show these men and women in miniature, that it is a dangerous plan to judge of things by outward appearances, but that there is a more correct way of judging, which forms a part of the business of education.

#### LESSON IN GRAMMAR TAUGHT INCIDENTALLY.

Grammar books and rules have rendered the study repulsive and unprofitable. But nothing is easier for the teacher, or more interesting to the pupil, than the conveyance of a knowledge of grammar incidentally in the course of reading, or even at play. Grammar is a name for the relation to each other of words, or rather of the ideas which they represent. Teach the children this relation before you give them the name for it in a part of speech; for example—*noun, adjective, adverb*, convey, as terms, no ideas to the children's minds; but they will easily comprehend that *a boy, a girl, a chair, a stone*, are NOUNS. *My boy, your girl, his chair, their stone*, will illustrate the PRONOUN before the term is communicated. The boy is *good*, the girl *attentive*, the chair *strong*, the stone *heavy*; this relation, when quite understood, requires a name, and that name is ADJECTIVE. SINGULAR and PLURAL, MASCULINE and FEMININE, are, in like manner, explained clearly before the names are given. Next follows the VERB, which, as a term, comes to be wanted by the children themselves, when they are made familiar with the action which a verb expresses; as, the boy *runs*, the girl *smiles*, the rain *falls*. Then comes the ADVERB, taught in the same way; as, the boy runs *swiftly*, the girl smiles *sweetly*, the rain falls *heavily*.

The boy runs *before* us, the girl smiles *at* him, the money is *in* my pocket, are relations which are expressed by the term PREPOSITION. The cry of surprise, O! Oh! Ah! will lead to the term INTERJECTION, which would be better named EXCLAMATION; while the relation of *you*

and I, or he, will furnish the idea for which CONJUNCTION is the name.

Having got *the parts of speech*, the teacher will proceed to the other parts of grammar in the same way, taking care that the idea precedes the name, and is early comprehended. For example, the PASSIVE as distinguished from the ACTIVE verb—the AUXILIARY VERB and the PARTICIPLE, both necessary to form the passive; as, *I am beaten*; the active being, *I beat*. The NEUTER VERB, with its adjunct *it*, as, *it rains*, *it freezes*—the TENSES and MOODS, the AGREEMENT of adjectives with nouns, in gender, number, and case—of nouns with verbs, &c.,—all these elements, a teacher well instructed in grammar, which, however, he is not to learn from *this* book, will easily render familiar by examples in every thing the children see and do; and when they read, they should be exercised in *parsing*, which is naming the parts of speech, and all the relations of words to each other; and should be occasionally tried with bad grammar, that they may detect it. But, perhaps, a short progress in grammar were enough for an Infant School, parsing and detecting bad grammar suiting a more advanced stage.

To enable the teacher to inculcate grammar, reference is made to the number on the subject in this series.

#### LESSONS ON ARITHMETIC AFTER MR WILDERSPIN'S METHOD.

The elements of arithmetic have been easily and successfully taught to the children of an Infant School. The principles of arithmetic cannot be better unfolded than by the tangible and visible exercise of the arithmeticon. The grand foundation of all arithmetical calculation, namely, that, work as we may in numbers, by the most intricate problems, we are only *adding* or *taking away*, is impressed upon the sight and touch of the child by that simple and useful instrument. The Arabic or Roman



signs for numbers,—which, by the common mode of tuition, we are early but erroneously led to consider the essence of number itself,—should only be communicated as so many names for numbers, after the idea of the numbers themselves is clear in the child's mind. By means of these convenient signs, numbers are easily combined in *written calculation*. *Mental calculation* needs no signs, but works with abstract numbers only. It is a great error to begin with the artificial signs in the multiplication table, and the pence and weights and measures tables, instead of first showing, *by real objects*, in what manner, by combinations of unity, all these are constituted.

Set the arithmeticon before the children (see page 24); with the whole 144 balls screened from their view by the thin board, and accustom them to see the balls increased and diminished in number upon the wires. Slide *one* ball into their view, and let every child declare it to be *one*. Add another, and let all declare that they now see *two*. The combination is simple, *one* and *one* are *two*; Add another ball, and then *one* and *one* and *one* are *three*; and so on, as far as the children can easily count; or at first as far as one line or wire, which is *twelve*. This is *real* addition, for the children have yet seen *no figures* or signs for the numbers with which they have been dealing. By whatever process they may afterwards *increase* the number of units, the essential thing done can be no other than the simple combination now set forth. But numbers may be diminished as well as increased; and a reverse process of *real* subtraction may be taught on the arithmeticon. Show *two* balls; then take away one, and let the children declare what remains; they will all say *one*. Then *one* from *two*, and *one* remains; is the arithmetical expression of that deduction or subtraction. Show three balls, and take off *one*. *One* from *three*, and *two* remain. *Two* from *three*, and *one* remains. Show four balls. *One* from *four*, and *three* remain; *two* from *four*, and *two* remain; *three* from *four*, and *one* remains.

remains ; and so on with five, six, seven, &c., in succession. Multiplication follows, which is nothing more than expeditious addition. *One* six times repeated to make *six*, is addition ; *twice three* or *thrice two* are *six*, is multiplication. Slide out two balls on the highest wire, and then two more, and ask how many times *two* are there ? The answer will be *twice*, or probably *two times*. Then *twice two* are *four*. Express this in addition—one *four times* repeated makes four. On the wire below slide out three balls, and follow them with three more. Put the same questions, so as to bring out that twice three is *six*, and expressed by addition, one six times repeated makes *six*. Go on with two fours, two fives, two sixes. After this take two wires for two sevens, and so on to two twelves. Let the children be well exercised on this very commencement of multiplication, and give proofs of perfectly understanding it, by being employed in the monitors' place themselves to slide the balls, before you begin with three as a multiplier, as three times two, three times three, three times four,—on one line as long as the result is lower than twelve, after which two, and farther on three wires will be needed. *Division* is to subtraction what multiplication is to addition ; it is compound subtraction. It comes to the same result whether we successively take two from six, and then two from four, to get the third part of six, or at once ask how many times two are in six ? three times. The third is on the arithmeticon made visible to the children by dividing the *six* balls into three twos. The same may be done with any other even number, and when the number is odd, it will be observed that there is one over.

After long practice with real visible and tangible numbers, the children may be introduced to the signs by which numbers are written and printed, namely, the Arabic numerals. Mr Wilderspin makes these of brass, and places them in the grooves of a board fixed below the arithmeticon. They may quite as well be drawn or printed on separate cards, so that they may be arranged

on the top of a stand like a capital T, made to hold twenty or thirty in a line for high numbers. Sliding one ball into view on the arithmeticon, at the same time show the figure 1, and impress that the last is not the number, but the *sign* for it. Slide along another ball, and show the sign 2, and so on to 9; then explain the use of the cipher 0; place it after 1 for 10, after 2 for 20, &c., and explain the combination of figures from 11 to 100, &c. The effect of *position* on the arithmetical figures may now be shown. A single figure denotes *units*, or from 1 unit up to 9 *units*. Another figure placed to the left of the first is in the place of *tens*, from 10 to 99. Another figure farther to the left takes the place of *hundreds*, from 100 to 999. Another, and the place of *thousands* is denoted, from 1000 to 9999, and so on to *tens of thousands*, *hundreds of thousands*, *millions*, *tens of millions*, *hundreds of millions*, *thousands of millions*, *tens of thousands of millions*, *hundreds of thousands of millions*, *billions*, &c. This can be done on the arithmeticon; as Mr Wilderspin suggests, one ball is unity, two represent *tens*—three, *hundreds*—four, *thousands*—five, *tens of thousands*, &c. This, however, is much better done with the Arabic figures; as balls, however placed, are but units each, and cannot each represent 2, 3, 4, 5, &c. The children may then be exercised in placing the figures in position;—take the figure 6 and place 1 before it, it is 16, but if 1 is placed after it, 61 is the result; place 5 before the 16, and we have 516; place 5 after 61, and we have 615. If the cipher 0, is placed after 615, we have 6150; another figure will bring it to *tens of thousands*, and so on. Suppose 7,643,280 are placed in the groove, or on the board, the children will tell from their right hand to their left, *units*, *tens*, *hundreds*, *thousands*, *tens of thousands*, *hundreds of thousands*, *millions*, and then read off, from left to right, *seven millions*, *six hundred and forty-three thousand*, *two hundred and eighty*.

The following is a specimen of Mr Wilderspin's method of exercising on the arithmeticon :—

*Addition.*—We proceed as follows :—1 and 2 are 3, and 3 are six, and 4 are 10, and 5 are 15, and 6 are 21, and 7 are 28, and 8 are 36, and 9 are 45, and 10 are 55, and 11 are 66, and 12 are 78.

Then the master may exercise them backwards, saying, 12 and 11 are 23, and 10 are 33, and 9 are 42, and 8 are 50, and 7 are 57, and 6 are 63, and 5 are 68, and 4 are 72, and 3 are 75, and 2 are 77, and 1 is 78, and so on in great variety.

Again : place seven balls on one wire, and two on the next, and ask them how many 7 and 2 are ; to this they will soon answer, Nine : then put the brass figure 9 on the tablet beneath, and they will see how the amount is marked : then take eight balls and three, when they will see that eight and three are eleven. Explain to them that they cannot put underneath two figure ones, which mean 11, but they must put 1 under the 8, and carry 1 to the 4, when you must place one ball under the four, and, asking them what that makes, they will say, Five. Proceed by saying, How much are five and nine ? put out the proper number of balls, and they will say, Five and nine are fourteen. Put a four underneath, and tell them, as there is no figure to put the 1 under, it must be placed next it : hence they see that 937 added to 482, make a total of 1419.

*Subtraction* may be taught in as many ways by this instrument. Thus : take 1 from 1, nothing remains ; moving the first ball at the same time to the other end of the frame. Then remove 1 from the second wire, and say, Take 1 from 2, the children will instantly perceive that only 1 remains ; then 1 from 3, and 2 remain ; 1 from 4, 3 remain ; 1 from 5, 4 remain ; 1 from 6, 5 remain ; 1 from 7, 6 remain ; 1 from 8, 7 remain ; 1 from 9, 8 remain ; 1 from 10, 9 remain ; 1 from 11, 10 remain ; 1 from 12, 11 remain.

Then the balls may be worked backwards, beginning at the wire containing 12 balls, saying, Take 2 from 12, 10 remain ; 2 from 11, 9 remain ; 2 from 10, 8 remain ;

2 from 9, 7 remain ; 2 from 8, 6 remain ; 2 from 7, 5 remain ; 2 from 6, 4 remain ; 2 from 5, 3 remain ; 2 from 4, 2 remain ; 2 from 3, 1 remains.

The brass figure should be used for the remainder in each case. Say then, can you take 8 from 3 as you point to the figures, and they will say " Yes ;" but show them 3 balls on a wire, and ask them to deduct 8 from them, when they will perceive their error. Explain that in such a case they must *borrow* one ; then say, take 8 from 13, placing 12 balls on the top wire, borrow one from the second, and take away eight, and they will see the remainder is five ; and so on through the sum, and others of the same kind.

In *Multiplication*, the lessons are performed as follows. The teacher moves the first ball, and immediately after the two balls on the second wire, placing them underneath the first, saying, at the same time, twice one are two, which the children will readily perceive. We next remove the two balls on the second wire for a multiplier, and then remove two balls from the third wire, placing them exactly under the first two, which forms a square, and then say, twice two are four, which every child will discern for himself, as he plainly perceives there are no more. We then move three on the third wire, and place three from the fourth wire underneath them, saying, twice three are six. Remove the four on the fourth wire, and four on the fifth ; place them as before, and say, twice four are eight. Remove five from the fifth wire, and five from the sixth wire underneath them, saying, twice five are ten. Remove six from the sixth wire, and six from the seventh wire underneath them, and say, twice six are twelve. Remove seven from the seventh wire, and seven from the eighth wire underneath them, saying, twice seven are fourteen. Remove eight from the eighth wire, and eight from the ninth, saying, twice eight are sixteen. Remove nine on the ninth wire, and nine on the tenth wire, saying, twice nine are eighteen. Remove ten on the tenth wire, and ten on the eleventh.

underneath them, saying, twice ten are twenty. Remove eleven on the eleventh wire, and eleven on the twelfth, saying, twice eleven are twenty-two. Remove one from the tenth wire to add to the eleven on the eleventh wire, afterwards the remaining ball on the twelfth wire, saying, twice twelve are twenty-four.

Next proceed backwards, saying, 12 times 2 are 24, 11 times 2 are 22, 10 times 2 are 20, &c.

For *Division*, suppose you take from the 144 balls gathered together at one end, one from each row, and place the 12 at the other end, thus making a perpendicular row of ones: then make four perpendicular rows of three each, and the children will see there are 4 3's in 12. Divide the 12 into six parcels, and they will see there are 6 2's in 12. Leave only two out, and they will see, at your direction, that 2 is the sixth part of 12. Take away one of these, and they will see one is the twelfth part of 12, and that 12 1's are twelve.

To explain the state of the frame as it appears in the cut, we must first suppose that the twenty-four balls, which appear in four lots, are gathered together at the *figured side*: when the children will see there are three perpendicular 8's, and as easily that there are eight horizontal 3's. If, then, the teacher wishes them to tell how many 6's there are in twenty-four, he moves them out as they appear in the cut, and they see there are four; and the same principle is acted on throughout.

Mental arithmetic is thus illustrated:—The only remaining branch of numerical knowledge, which consists in an ability to comprehend the powers of numbers, without either visible objects or signs, is imparted as follows:—

#### *Addition.*

One of the children ascends the rostrum or small pulpit, and repeats aloud, in a kind of chant, the whole of the school repeating after him—One and one are two;

two and one are three ; three and one are four, &c., up to twelve.

Two and two are four ; four and two are six ; six and two are eight, &c., to twenty-four.

Three and three are six ; six and three are nine ; nine and three are twelve, &c., to thirty-six.

### *Subtraction.*

One from twelve leaves eleven ; one from eleven leaves ten, &c.

Two from twenty-four leave twenty-two ; two from twenty-two leave twenty, &c.

### *Multiplication*

Twice one are two ; twice two are four, &c. &c.

Three times three are nine ; three times four are twelve, &c. &c.

Twelve times two are twenty-four ; eleven times two are twenty-two, &c. &c.

Twelve times three are thirty-six ; eleven times three are thirty-three, &c. &c., until the whole of the multiplication table is gone through.

### *Division.*

There are twelve twos in twenty-four ; there are eleven twos in twenty-two, &c. &c.

There are twelve threes in thirty-six, &c.

There are twelve fours in forty-eight, &c. &c.

### *Fractions.*

Two are the half ( $\frac{1}{2}$ ) of four.

— third ( $\frac{1}{3}$ ) of six.

— fourth ( $\frac{1}{4}$ ) of eight.

Three are the half ( $\frac{1}{2}$ ) of six.

Three are the third ( $\frac{1}{3}$ ) of nine.

———— fourth ( $\frac{1}{4}$ ) of twelve.

And so on with other fractions.

The tables subjoined are repeated by the same method, each section being a distinct lesson. To give an idea to the reader, the boy in the rostrum says ten shillings the half ( $\frac{1}{2}$ ) of a pound ; six shillings and eightpence one-third ( $\frac{1}{3}$ ) of a pound, &c.

Sixpence the half ( $\frac{1}{2}$ ) of a shilling, &c. Always remembering, that whatever the boy says in the rostrum, the other children must repeat after him, but not till the monitor has ended his sentence ; and before the monitor delivers the second sentence, he waits till the children have concluded the first, they waiting for him, and he for them ; this prevents confusion, and is the means of enabling persons to understand perfectly what is going on in the school.

Mr Wilderspin adds the following table :—



*Numeration, Addition, Subtraction, Multiplication,  
Division, and Pence Tables.*

ADDITION AND SUBTRACTION TABLE.											
1 &		2 &		3 &		4 &		5 &		6 &	
1 are	2	1 are	3	1 are	4	1 are	5	1 are	6	1 are	7
2 —	3	2 —	4	2 —	5	2 —	6	2 —	7	2 —	8
3 —	4	3 —	5	3 —	6	3 —	7	3 —	8	3 —	9
4 —	5	4 —	6	4 —	7	4 —	8	4 —	9	4 —	10
5 —	6	5 —	7	5 —	8	5 —	9	5 —	10	5 —	11
6 —	7	6 —	8	6 —	9	6 —	10	6 —	11	6 —	12
7 —	8	7 —	9	7 —	10	7 —	11	7 —	12	7 —	13
8 —	9	8 —	10	8 —	11	8 —	12	8 —	13	8 —	14
9 —	10	9 —	11	9 —	12	9 —	13	9 —	14	9 —	15
10 —	11	10 —	12	10 —	13	10 —	14	10 —	15	10 —	16
11 —	12	11 —	13	11 —	14	11 —	15	11 —	16	11 —	17
12 —	13	12 —	14	12 —	15	12 —	16	12 —	17	12 —	18
7 &		8 &		9 &		10 &		11 &		12 &	
1 are	8	1 are	9	1 are	10	1 are	11	1 are	12	1 are	13
2 —	9	2 —	10	2 —	11	2 —	12	2 —	13	2 —	14
3 —	10	3 —	11	3 —	12	3 —	13	3 —	14	3 —	15
4 —	11	4 —	12	4 —	13	4 —	14	4 —	15	4 —	16
5 —	12	5 —	13	5 —	14	5 —	15	5 —	16	5 —	17
6 —	13	6 —	14	6 —	15	6 —	16	6 —	17	6 —	18
7 —	14	7 —	15	7 —	16	7 —	17	7 —	18	7 —	19
8 —	15	8 —	16	8 —	17	8 —	18	8 —	19	8 —	20
9 —	16	9 —	17	9 —	18	9 —	19	9 —	20	9 —	21
10 —	17	10 —	18	10 —	19	10 —	20	10 —	21	10 —	22
11 —	18	11 —	19	11 —	20	11 —	21	11 —	22	11 —	23
12 —	19	12 —	20	12 —	21	12 —	22	12 —	23	12 —	24

MULTIPLICATION AND DIVISION TABLE.											
2—2 are	4	4—5 are	20	6—12 are	72	1 Units. 21 Tens. 321 Hundreds. 4,321 Thousands. 54,321 X of Thousands. 654,321 C of Thousands. 7,654,321 Millions. 87,654,321 X of Millions. 987,654,321 C of Millions.					
3 —	6	6 —	24	7 —	49						
4 —	8	7 —	28	8 —	56						
5 —	10	8 —	32	9 —	63						
6 —	12	9 —	36	10 —	70						
7 —	14	10 —	40	11 —	77						
8 —	16	11 —	44	12 —	84						
9 —	18	12 —	48	8—8 are	64						
10 —	20	5—5 are	25	9 —	79						
11 —	22	6 —	30	10 —	80						
12 —	24	7 —	35	11 —	88						
3—3 —	9	8 —	40	12 —	96	PENCE TABLE.					
4 —	12	9 —	45	9—9 —	81						
5 —	15	10 —	50	10 —	90						
6 —	18	11 —	55	11 —	99						
7 —	21	12 —	60	12 —	108						
8 —	24	6—6 —	36	10—10 —	100						
9 —	27	7 —	42	11 —	110						
10 —	30	8 —	48	12 —	120						
11 —	33	9 —	54	11—11 —	121						
12 —	36	10 —	60	12 —	132						
4—4 —	16	11 —	66	12—12 —	144						

d.	s.	d.	d.	s.	d.
20 is	1	8	80 is	7	2
30 —	2	6	100 —	8	3
40 —	3	4	110 —	9	4
50 —	4	2	120 —	10	5
60 —	5	0	130 —	11	6
70 —	5	10	140 —	12	7
80 —	6	8	144 —	12	0

## Tables of Weights and Measures.

Shillings Table.					
s.	l.	s.	s.	l.	s.
20	are	1	0	100	are 5 0
30	—	1	10	110	— 5 10
40	—	2	0	120	— 6 0
50	—	2	10	130	— 6 10
60	—	3	0	140	— 7 0
70	—	3	10	150	— 7 10
80	—	4	0	160	— 8 0
90	—	4	10	170	— 8 10

Practice Table.					
Of a Pound.					
s.	d.				
10	0	are	half		
6	8	—	third		
5	0	—	fourth		
4	0	—	fifth		
3	4	—	sixth		
2	6	—	eighth		
1	8	—	twelfth		
1	0	—	twentieth		
Of a Shilling					
6d.	are	half			
4	—	third			
3	—	fourth			
2	—	sixth			
1	—	twelfth			

Time.					
60	seconds	1	minute		
60	minutes	1	hour		
24	hours	1	day		
7	days	1	week		
4	weeks	1	lunar month		
12	cal. mons.	1	year		
13	lunar months,	1	day, 6		
hours,	or 365	days,	6		
hours,	1	year.			
Thirty days hath Septem-					
ber,					
April, June, & November;					
All the rest have thirty-					
one,					
Save February, which					
alone					
Hath twenty-eight, ex-					
cept Leap year,					
And twenty-nine is then					
its share.					

Troy Weight.	
24	grains 1 pennywt.
20	pennywts. 1 ounce
12	ounces 1 pound

Avoirdupois Weight.	
16	drams 1 ounce
16	ounces 1 pound
28	pounds 1 quarter
4	quarters 1 hund. wt.
20	hund. wt. 1 ton

Apothecaries Weight.	
20	grains 1 scruple
3	scruples 1 dram
8	drams 1 ounce
12	ounces 1 pound

Wool Weight.	
7	pounds 1 clove
2	cloves 1 stone
2	stones 1 tod
64	tods 1 wey
2	weys 1 sack
12	sacks 1 last

Wine Measure.	
2	pints 1 quart
4	quarts 1 gallon
10	gallons 1 ank. bndy.
42	gallons 1 tierce
63	gallons 1 hogshead
84	gallons 1 puncheon
2	hogsheads 1 pipe
2	pipes 1 ton

Ale & Beer Measure.	
2	pints 1 quart
4	quarts 1 gallon
8	gallons 1 firkin of ale
9	gallons 1 firkin of beer
2	firkins 1 kilderkin
2	kilderkins 1 barrel
14	barrel 1 hogshead
2	barrels 1 puncheon
3	barrels 1 butt

Coal Measure.	
4	pecks 1 bushel
9	bushels 1 vat or strike
3	bushels 1 sack
12	sacks 1 chaldron
19	chaldron 1 score

Dry Measure.	
2	pints 1 quart
2	quarts 1 pottle
2	pottles 1 gallon
2	gallons 1 peck
4	pecks 1 bushel
2	bushels 1 strike
5	bushels 1 sack flour
8	bushels 1 quarter
5	quarters 1 wey or load
5	pecks 1 bshl. water measure
4	bushels 1 coom
10	cooms 1 wey
2	weys 1 last corn

Solid or Cubic Measure.	
1728	inches 1 foot
27	feet 1 yard or ld.

Long Measure.	
3	barleycorns 1 inch
12	inches 1 foot
3	feet 1 yard
6	feet 1 fathom
54	yards 1 pole or rood
40	poles 1 furlong
8	furlongs 1 mile
3	miles 1 league
20	leagues 1 degree

Cloth Measure.	
24	inches 1 nail
4	nails 1 quarter
4	quarters 1 yard
5	quarters 1 English ell
3	quarters 1 Flemish ell
6	quarters 1 French ell

Land or Square Meas.	
144	inches 1 foot
3	feet 1 yard
304	yards 1 pole
40	poles 1 rood
4	roods 1 acre
640	acres 1 mile
This includes length and breadth	

Hay.	
36	pounds 1 truss of straw
56	pounds 1 do of old hay
60	pounds 1 do of new
36	trusses 1 load

## LESSONS ON GEOMETRICAL FIGURES.

It has been found quite practicable to impress the elementary geometrical figures on the memory of children. They have been observed to remember and apply them to objects out of doors, even in their play, and will not be likely to forget them in the business of after life. Mr Wilderspin's gonigraph is an ingenious and simple instrument for this purpose, (see page 23 hereof.) The instrument is held up, arranged into a *straight line*, and the children are asked what it is? (or a *curved line*.) Two of the parts are then placed parallel, and explained to be *parallel lines*. Parallel is defined to mean lines equally distant from each other in every point, and which, however extended, would never meet. *Diverging* and *converging lines* may then be shown, and illustrated by holding up two neighbouring fingers separated at top. If converging lines are prolonged, they will meet or intersect, and form an *angle*. There are three distinct kinds of angles, a *right angle*, an *acute angle*, and an *obtuse angle*. To form the first, one line is drawn *perpendicular* to another. Explain perpendicular to mean perfectly upright, relatively to the other line. To form an acute angle, the line slopes to meet the other, but nearer to it than perpendicular. To form an obtuse angle, the line also slopes to meet the other, but farther from it than perpendicular. The gonigraph will now complete the triangle, which is of three kinds, *equilateral*, *isoseles*, and *scalene*. An *equilateral* triangle has all its sides and angles equal. Distinguish its angles and sides. The *isoseles* has two sides and two angles equal; a *scalene* has all its sides and angles different. It will be quite easy to ascertain whether the children understand these three figures. The instrument will show the *square*, with its four equal sides and equal angles—the *pentagon* with five sides and five angles—the *hexagon* with six sides and six angles—the *heptagon* with seven sides and seven angles—the *octagon*.

with eight, &c. The *polygon* has many sides. The *oblong* or *rectangle* is a figure with four sides, two alike, and all the four angles right angles. The *rhombus* has all its sides equal, but its angles not right angles. The *rhomboid* is that figure which has its opposite sides parallel—the *trapezium* has the opposite sides not parallel—the *trapezoid* has two of the opposite sides parallel.

The *circle* is a curved line, the ends of which meet, and every point of which is equally distant from the middle or centre. A line drawn through the centre is called the *diameter*, and half of that line is called the *radius*, like the spoke of a wheel. Half the circle is called a *semi-circle*. Less than that a *segment* of a circle. The *ellipse* or *oval* is a curved line, the ends of which meet, but every point of which is not equally distant from the centre; but this is true of the centre of the two ends, and the centre of the two sides. An egg is nearly, though not quite, regularly oval. The *parabola* is half an oval, and is described by an arrow or ball shot upwards in a sloping direction.\*

Mr Wilderspin most properly suggests that a measure of size and length should always be exhibited to children, and yards, feet, inches, shown to them in reality, instead of being only talked about. He recommends that there shall be kept always ready two five feet rods, with a foot marked black and white alternately, the lowest foot marked in inches, with a slide to move up and down, to mark various lengths, so that when the height of anything, as a lion, a horse, or an elephant, is spoken of, it may be shown by the rod; while girth may be shown by a piece of cord or tape marked as on the rod.

Solid figures in geometry should also be taught to the children, and their relation shown to surface or plane figures, the distinction between the two being explained. A *plane* should be exhibited to them in the surface of a

\* It has not been considered necessary to give here the diagrams of the figures; it being presumed that the teacher knows them, and can show them in his own drawings.

piece of card, and cards being made to represent planes, the solid figures may be compounded with them, and by them parallel planes, and planes inclined to and intersecting each other, can be shown, while lines represented by wires can be placed perpendicular, and inclined to a plane.

1. *Rectilineal Solids*.—The *prism* is a solid figure, of which two sides that are opposite are similar and parallel, and the others are parallelograms. A *right prism* is when the sides are perpendicular to the base, and the kind of prism is determined by the base; thus, a *triangular prism*, a *quadrangular*, *pentagonal*, *hexagonal prism*. The prismatic colours might here be shown by a glass prism. The *parallelopiped* is a prism which has a parallelogram for its base, and all its sides parallelograms. It is rectangular when all its sides are rectangular. When the faces of a rectangular parallelopiped are squares, it is called a cube, which is constructed of six square planes. The *pyramid* is a solid formed by several triangular planes meeting in a point, and terminating in the same plane rectilineal figure as a base. A pyramid may be triangular or quadrangular, according to the form of its base. The pyramids of Egypt are quadrangular. The *altitude* of a pyramid is the perpendicular line from the pointed top, called the *apex*, to the base.

2. *Curved Solids*.—The *cylinder* is a solid figure produced by the revolution of a right-angled parallelogram about one of its sides, that side remaining fixed. The *axis* is the straight line on which the parallelogram revolves. The *bases* of the cylinder are the two circles, one at each end. The cone is a solid figure produced by the revolution of a right-angled triangle upon the side containing the right angle, which side remains fixed. The *axis* and *base* are obvious. The *sphere* or *globe* is the solid figure produced by the revolution of a semicircle about a diameter which remains fixed. The *axis* is the straight line about which the semicircle revolves. The *centre* is the same with that of the semicircle. The production of

the cylinder, cone, and sphere, can be shown by pieces of thin wood or card, of the form of a rectangle or oblong, a right-angled triangle, and a semicircle, respectively, fixed to an upright pin made to turn round. The solids themselves, made in wood, will of course be shown, and the teacher will lose no opportunity of testing the knowledge of the pupils, by encouraging them to point out the various geometrical figures enumerated, both plane and solid, in objects around them. A chimney-pot on the house-top is a cylinder; the cap on the top of it is a cone; a ball, an apple, or a bullet, is a sphere. The window pane is a square, or a rectangle; so is the ceiling, the floor, and each wall of the school-hall. The total hall forms a parallelopiped. If the side class-room happens to be square, and the same height as length and breadth, it is a cube; and so on, as must be evident to the teacher, in many other familiar objects.

## LESSONS ON GEOGRAPHY.

The school should have a large map of the world, and even a terrestrial globe; a large map of each of the four quarters of the earth, and one of the British islands. The children will readily learn the zones and circles of the earth, the equator, and meridian; the kingdoms and their capital cities; the rivers, mountains, seas, and oceans; the points of the compass, and the cardinal points, practised in the playground. The globe will impress upon them the sphericity, and the rotation of the earth on its own axis, and it is easy to show them how the earth revolves round the sun, and how the moon revolves round the earth. It is unnecessary to lengthen this example, as the elements of the study will be found in the proper number of this series. The children have great pleasure in "singing the Capitals," as they call it, to the tune of "*Who'll be king but Charlie.*"

London is the capital, the capital, the capital—  
London is the capital, the capital of England.

And so of the other capitals.

#### LESSONS ON THE ELLIPTICAL METHOD OF TEACHING.

To Mr Wilderspin belongs, as far as we know, the undivided credit of imagining and realizing this ingenious method of exciting and keeping alive the interest of the pupil, in any narrative, anecdote, or other appropriate matter which is going on. It is therefore due to Mr Wilderspin to give his exposition of this contrivance in his own words.

All persons acquainted with children are aware of the torpor of some minds, and of the occasional apathy of others, and to this it is necessary to provide some counteraction. This is done effectually by what is called the elliptical plan, according to which words are omitted in a narrative or poem repeated by the teacher, for the purpose of being supplied by the children.

These exercises are very agreeable to the children, and by them some features of the mental character become conspicuous. Children are usually sensible of their need of instruction, but if they can make it appear that any of their statements are original, their delight is especially manifest. There seems, too, a dislike, at first, to take any trouble to arrive at the truth; careless children will therefore guess several times; but an observant teacher will at once perceive that this is no exercise of the understanding, point it out to the child, and thus prevent its recurrence.

My usual practice with respect to the elliptical method of teaching is, to deliver some appropriate, simple, extemporaneous tale, leaving out but few words at first, and those such as must obviously strike the children; as they get used to the plan, I make the omissions more frequent, and of words less obvious. The following specimens will render the whole plain to the understanding, of my readers:—

A gardener's youngest<sup>1</sup> was walking among the fruit<sup>2</sup> of his father's<sup>3</sup>, he saw a little<sup>4</sup> fly up and sit on one of the<sup>5</sup> of the trees; the<sup>6</sup> lifted a stone, and was going to<sup>7</sup> it at the poor<sup>8</sup> which seemed to<sup>9</sup> most sweetly thus :

" My<sup>10</sup> is<sup>11</sup> of moss and hair,  
The<sup>12</sup> are<sup>13</sup> and sheltered there ;  
When<sup>14</sup> soon shall my young<sup>15</sup> fly  
Far from the<sup>16</sup> school<sup>17</sup> eye."

The<sup>18</sup> eldest<sup>19</sup> who understood the<sup>20</sup> of birds came up at that moment, and<sup>21</sup> out, throw down the<sup>22</sup>, you hard-hearted<sup>23</sup>, and don't<sup>24</sup> the innocent<sup>25</sup> in the middle of his song; are you not<sup>26</sup> with his swelling red-breast, his beautiful sharp eye, and, above all, with the<sup>27</sup> of his notes, and the familiar<sup>28</sup> he assumes, even in the<sup>29</sup> of a<sup>30</sup> like you? Ask your youngest<sup>31</sup> here if she remembers the<sup>32</sup> which her good<sup>33</sup> read to her yesterday of a very<sup>34</sup> boy, who was very<sup>35</sup> to a harmless green<sup>36</sup> which he caught<sup>37</sup> for hunger, among the<sup>38</sup> in the<sup>39</sup> of winter.

The following little verses upon the same principle have been found to answer extremely well, by putting one child in the rostrum, and desiring him purposely to leave out those words that are marked ; the other children will fill them up as he goes on.

<sup>1</sup> Son <sup>2</sup> trees <sup>3</sup> garden <sup>4</sup> bird <sup>5</sup> branches <sup>6</sup> boy <sup>7</sup> throw  
<sup>8</sup> bird <sup>9</sup> sing <sup>10</sup> nest <sup>11</sup> built <sup>12</sup> eggs <sup>13</sup> laid <sup>14</sup> hatched <sup>15</sup> ones  
<sup>16</sup> roaming <sup>17</sup> boy's <sup>18</sup> gardener's <sup>19</sup> son <sup>20</sup> notes <sup>21</sup> called <sup>22</sup> stone  
<sup>23</sup> rogue or boy <sup>24</sup> disturb or hurt <sup>25</sup> bird <sup>26</sup> pleased or delighted  
<sup>27</sup> sweetness or melody <sup>28</sup> air <sup>29</sup> presence <sup>30</sup> naughty boy <sup>31</sup> sister  
<sup>32</sup> story <sup>33</sup> mother, aunt, &c. <sup>34</sup> naughty or good <sup>35</sup> cruel or  
kind <sup>36</sup> finch or linnet <sup>37</sup> perishing or dying <sup>38</sup> snow <sup>39</sup> depth  
or middle.



## CREATION.

God made the            that looks so blue,  
                  God made the            so green,  
 God made the            that smell so sweet,  
                  In                            colours seen.

God made the            that shines so bright,  
                  And gladdens all I see;  
 It comes to give us            and light,  
                  How thankful should we be!

God made the            bird to fly,  
                  How            has she sung;  
 And though she            so very high,  
                  She won't            her young.

God made the            to give nice milk,  
                  The horse for            to use;  
 I'll treat them            for his sake,  
                  Nor dare his gifts abuse.

God made the            for my drink,  
                  God made the            to swim,  
 God made            to bear nice fruit,  
 Which does my            so nicely suit;  
                  O how should I            him!

"O Lord, how manifest are thy works; in wisdom hast thou made them all!"—*Psalm civ.* 24.

I subjoin, as an exercise for teachers themselves, the following hymn,—as one calculated to induce reflections on the scenes of nature, and direct the mind to that Being, who is the source of all excellence.

1. Hast            beheld            glorious  
                  Through all            skies his circuit run,  
                  At rising morn,            closing day,  
                  And when he beam'd his noontide

2. Say, didst e'er attentive  
The evening cloud, morning dew?  
Or, after , the watery bow  
Rise in the a beauteous ?
3. When darkness had o'erspread the  
Hast thou e'er seen the arise,  
And with a mild and placid  
Shed lustre o'er the face of night ?
4. Hast e'er wander'd o'er the plain,  
And view'd the fields and waving  
The flowery mead, leafy grove,  
Where all harmony love ?
5. Hast thou e'er trod the sandy  
And the restless roar,  
When roused by some tremendous  
Its billows rose dreadful form ?
6. Hast thou beheld the stream  
Through night's dark gloom, sudden gleam,  
While the bellowing thunder's  
Roll'd rattling the heavens profound ?
7. Hast thou e'er the cutting gale,  
The sleeting shower, biting hail ;  
Beheld snow o'erspread the  
The water bound icy chains ?
8. Hast thou the various beings  
That sport the valley green,  
That warble on the spray,  
Or wanton in the sunny ?
9. That shoot along briny deep,  
Or ground their dwellings keep ;  
That through the forest range,  
Or frightful winds deserts strange ?

10. Hast the wondrous scenes survey'd,  
That all around thee display'd?  
And hast never raised thine  
To HIM bade these scenes arise?
11. 'Twas GOD who form'd the concave  
And all the glorious orbs high;  
gave the various beings birth,  
That people all the spacious
12. 'Tis that bids the tempests  
And rolls the through skies;  
His voice the elements  
Through all the extends His sway.
13. His goodness His creatures share,  
But MAN is HIS peculiar  
Then, while they all proclaim praise,  
Let his the loudest

## MUSIC.

This is perhaps the most novel and distinguishing feature of an infant school. Music resounds in it all the day long: the passer-by hears the strains, and approves that mode of keeping the children cheerful and happy. The merit of the invention is due to Mr Wilderspin, who, possessing a pleasing voice, and some musical talent, was early induced to apply these gifts to the great object which he had in view. Many of the lessons are sung by the children, and thereby the better remembered. All who have courage can pick up the tune when it is frequently sung over to them, care being taken not to allow them to sing it till by that means it is impressed upon their musical memory. The great majority in all infant schools actually learn to sing. Mr Wilderspin says that in time all will learn. This perhaps is overrating; and we should

advise the teacher to allow the melody to be spoiled by very unpromising subjects: it is easy for *them* to be silent. Musical exercise has been found to aid in refining and humanizing the pupils, and it is always agreeable to them. They strike up the air when proposed with the utmost alacrity, and seem always happy when singing. It is useful to make them march in time to their own song, and to beat time with their hands. The teacher, if qualified, should learn an instrument, the violin, clarionet, or flute. The first is the most convenient, as he can speak while he plays. The children may march to his music, and even dance to it. There could not be a better in-door exercise for a wet day than as many sets of Scotch reels as the room will hold, relieving each other. It is an important addition to the qualifications of an Infant School teacher that he should sing, and love and practise music. Various verses to be sung, and the airs, will be found in the Appendix, No. VI.

#### EXERCISE IN AMUSING MOVEMENTS, IMITATIONS, &c.

It is not to be forgotten that the pupils are infants, and require the amusements suited to their age. The teacher of an Infant School, who can devise and practise the greatest variety of attractive, and even whimsical diversions, which shall yet have something in them improving, is the most likely to conduct an Infant School successfully. Mr Wilderspin is the master of all infant school teachers in this art of rousing and exciting the children, when their spirits flag, or a hot day renders them drowsy; his very manner of conducting the little sports must be imitated, if the teacher would succeed. He deprecates buffoonery and ridiculous pastimes, and holds that all the children's movements may be graceful, though active and joyous.

The following have been communicated by Mr Milne, teacher of the Edinburgh Model School, as little feats

practised there, most of them suggested by Mr Wilderspin, and some added by Mr Milne himself.

### *The Winds.*

(Children seated in the Gallery.)

Teacher, sitting before them, says 'A Dead Calm. All immediately become quiet and motionless, and continue so till the teacher says, 'A breeze.' All then gently rub their hands, in imitation of the rustling of the leaves. 'A gale.' Add to the rubbing of the hands a slight hissing. 'A storm.' Add a slight noise with the feet. 'A hurricane.' Do all with more vehemence.

### *The Steam Boat.*

To imitate the noise of the engine. All clap their hands twice, then give one beat on their knees, at same time make their heels give a slight blow on the floor. Clap hands again, &c.

### *Accelerated Motion.*

This is done by clapping their hands, at first very slow, and gradually getting quicker and quicker.

### *Animal Cries, &c.*

Cuckoos, dogs, sheep, ducks, rooks, serpents, bees, bitterns : watches ticking in a watchmaker's shop.

### *Manual Exercises.*

(By the word of command.)

Right hand up.	_____ down, and
Left hand up.	_____ down, and
Both hands up.	
Fingers apart.	Fingers together.
Back of the hands.	Palms of the hands.
Finger joints.	Wrist joints.
Elbow joints.	Shoulder joints.

*Manual Exercises.*

(By imitating the Master.)

Stretching out and in the arms.

Stretching up and down the arms.

Crossing the arms.

Twisting the arms.

Gradual motions from perpendicular to horizontal position of the arms, and the reverse.

*Pointing out Parts of the Body.*

The teacher names the parts, and the children touch or point to them.

Crown of the head.

Forehead.

Eyelids.

Eyebrows.

Cheeks.

Nostrils.

Upper lip.

Teeth.

Tongue.

Neck.

Armpits.

Wrists.

Thumbs.

Nails.

Sides.

Back of the head.

Eyes.

Eyelashes.

Ears.

Nose.

Lips.

Under lip.

Gums.

Chin.

Shoulders.

Elbows.

Fingers.

Knuckles.

Breast.

Back.

*Counting a Hundred.*

From 1 to 20,—Beating on the knees alternately.

—— 20 to 30,—Stretching out the arms alternately.

—— 30 to 40,—Nodding the head.

—— 40 to 50,—Clapping the hand.

—— 50 to 60,—Moving the fingers.

—— 60 to 70,—Crossing one forefinger over the other alternately.

- From 70 to 80,—Stretching up the arms, taking the tones  
of the voice thirds and fifths.  
—— 80 to 90,—Gradually raising the hands, and going  
up the scale with the voice.  
—— 90 to 100,—Lowering the hands, and descending  
the scale.

*Sawing.*

All standing up, put out their hands and bend their bodies, as the man above the saw-pit, and make a hissing noise ; then raise themselves quietly ; then bend down again, hissing, &c.

*Rhyme.*

(With corresponding motions.)  
Together we children assemble at school,  
And must be attentive to order and rule :  
We sing or we read as our teacher commands,  
And keep time so nicely in clapping of hands.

Our hands and our faces so tidily clean,  
And moving so nimbly our fingers are seen,  
When wearied with sitting, our arms we stretch out,  
And afterwards twist them so quickly about.

Our right from our left hand we easily know,  
Apart or together our fingers we show :  
We quickly exhibit the moving of joints,  
Wrists, elbows, or shoulders, as master appoints

*The Positions of Rest.*

The master, placing a boy silently into each position before the children in the gallery, when they name the position.

1. Standing ; 2. Leaning ; 3. Sitting ; 4. Reclining ;
5. Kneeling ; 6. Squatting ; 7. Lying.

*Animal Motions.*

(Imitating as nearly as possible.)

Walking, marching, running, hopping, leaping, skipping, climbing, dancing, tumbling, swinging, swimming, flying, riding, lifting, throwing, hoisting, pulling, pushing, sliding.

*The Prepositions Illustrated.*

at		}	These are shown by so many ways, that a description can scarcely be given. For example, point <i>at</i> an object, show the back <i>of</i> a book, place one thing <i>upon</i> , <i>above</i> , <i>below</i> , <i>before</i> , <i>behind</i> , <i>near</i> , another.
of			
in	out		
on	off		
upon	under		
above	below-beneath		
up	down		
to	from		
by	through		
with	without		
before	behind		
near	far		
beside	among		
between	on either side		
on this side	beyond		
along	across.		

*The Pronoun Ring or Circle.*

Placing a boy, a girl, a post, a boy, a girl, a chair, a boy, a girl, a stool, a boy, a girl, a chair, in a circle.

(Go over them.)

1st.	Boy,	Girl,	Post, &c.
2d.	Masculine,	Feminine,	Neuter, &c.
3d.	His,	Hers,	Its, &c.
4th.	He,	She,	It, &c.
5th.	Him,	Her,	It, &c.



Then placing another boy, girl, and post, to make two boys, girls, and posts together.

1st.	Boy,	Girls,	Post,
	Boy,	Girl,	Chair,
	Boys,	Girl,	Stool,
	Boy,	Girl,	Posts,
2d.	He,	They,	It,
	He,	She,	It,
	They,	She,	It,
	He,	She,	They,
3d.	Him,	Them,	It,
	Him,	Her,	It,
	Them,	Her,	It,
	Him,	Her,	Them,
4th	His,	Theirs,	Its,
	His,	Hers,	Its,
	Theirs,	Hers,	Its,
	His,	Hers,	Theirs,
5th.	Singular,	Plural,	Singular, &c.

The following is taken from Mr Wilderspin's volume :

The children are desired to sit on their seats, with their feet out straight, and to shut each hand ; and then ordered to count a hundred, or as many as may be thought proper, lifting up each hand every time they count one, and bringing each hand down again on their knees when they count another. The children have given this the name of blacksmith ; and when asked why they called it blacksmith, they answered, because they hammered their knees with their fists, in the same way as the blacksmith hammers his irons with a hammer. When they have arrived at a hundred, (which they never fail to let you know by giving an extra shout,) they may be ordered to stand up, and bring into action the joints of the knees and thighs. They are desired to add up one hundred, two at a time, which they do by lifting up each foot alternately, all the children counting at one time, saying, two, four, six, eight, ten, twelve, and so on. By this means

every part of the body is put in motion ; and it likewise has this advantage, that by lifting up each foot every time, they keep good time, a thing very necessary, as otherwise all must be confusion. They also add up three at a time.

## IMPORTANT CAUTION.

This section ought not to be concluded without a caution, the omission of which might cause infant education to become an irremediable evil, instead of good, to its innocent objects. We learn from physiological observations, too numerous and accurate to admit of doubt, that the brain, the instrument of the mind, is in infancy imperfectly developed, unconsolidated, and subject in its own substance to serious disease, as well as to be the cause of other diseases, BY BEING OVERTASKED. Now this overtasking is an error into which infant school teachers are very apt to fall in the intellectual department of the training. They cannot, they suppose, have enough of lesson exercise, or advance their pupils too fast and too far "*in their learning.*" Parents, they say, expect it, and have not learned to appreciate any thing else, and to their ignorant prejudices they are forced to yield. This is a grievous—often a fatal error. We refer to what has been said in our introductory matter, pages 5th, 9th, and 10th, on the *secondary* importance of intellectual to moral, and even to physical, training, at that early age. It ought to be secondary in the time allotted to it, and the attention bestowed upon it. It should not task the memory, or have in it the slightest character of labour for any of the faculties. Conversant with *objects* more than words, it should be little more than a better directed and more systematic exercise of the senses and the simple observing powers, than the child would engage in if left to himself. It ought all to be amusement, not study or exertion. If the knowledge is gained, it should be as easily gained as if picked up spontaneously by the way.

It may be asked, how does such light study agree with the numerous lessons arranged and referred to in this and the previous section? Our answer is twofold—A small and easy portion of these lessons is given at any one time, for the total is the work of four years;—and there is none of them which may not be imparted by insensible degrees, without approaching to labour, or going beyond amusement. In most infant schools, the in-door occupation, we think, bears too large a proportion to the out, or, in bad weather, to the in-door recreation. The common practice is, an hour's sitting, at least an hour's lessons, and a quarter of an hour's play, alternately. We should wish to see the children, for a much larger proportion than this, in the playground. However alternated, HALF THE TIME OF SCHOOL OUGHT UNQUESTIONABLY TO BE SPENT AT PLAY. There is no time for moral exercise in the brief intercourse of ten minutes' play, cut short by the hand-bell. The teacher, too, by the very allotment of time to each, is insensibly led to devote himself to the intellectual teaching as primary, and to slur over the moral and physical exercise as secondary. This he has another temptation to do, the intellectual is the only *exhibit* training. The ambition to *show off* the children's attainments, which, to gratify the teacher's vanity, perils the bodies and minds of his pupils, ought to be unsparingly put down by the directors of an infant school, and foresworn by the teacher himself.

There are too many "*Books for Infants.*" Infants require no books. Good books for infants' *teachers* are what are wanted; and these will tell them that they cannot give the children too much of the playground and its exercises, mingle too much with them there, or too much observe, and regulate, and guide, the dispositions which they manifest in their playground intercourse. We recommend to every infant school teacher to be possessed of a copy of the work of an American writer, Dr Amariah Brigham, "*On the Influence of Mental Cultivation and Excitement upon Health.*" In nearly every word of

that admirable little work, we cordially concur. No teacher can read it, and continue *blindly* to overtask the infant brain. It is a work, which, properly understood, will not discourage infant schools, but prevent their abuse; will not supersede that early training of the dispositions, without which they never will be trained at all, but guard that paramount object from being rendered of none effect, by a course injurious, and often destructive, to the mind itself. We also recommend another American work, Dr Charles Caldwell's *Thoughts on Physical Education*, a discourse delivered to a convention of teachers in Lexington, and Dr Andrew Combe's *Physiology, as connected with the Preservation of Health*. These three works should be the constant companions of every infant school teacher.

It may here be briefly noticed that Dr Brigham justly holds that the exercise of the *moral faculties or feelings* is unattended with the dangers of excessive intellectual labour, provided always that over excitement, and every thing that rouses selfish passions, such as rewards offered to emulation, or punishments addressed to fear, are carefully avoided.



#### SECTION IV.

PREVENTION OF PREJUDICES—FALLACIES—TYRANNIES—  
CRUELITIES—UNFAIRNESSES—SELFISHNESSES—BAD HABITS, &c.

THERE is no part of the Infant System more important than the field for watchfulness and exertion, indicated by this title. There are no greater moral evils, or causes of evil, than that title enumerates. It is by judicious infant training alone that they can be warded off, and society defended from their consequences. It is not meant here to specify every prejudice, bad feeling, or bad habit,

which obstructs and deranges human affairs. A few only are mentioned as examples. Others will occur to an enlightened and moral teacher; and there are no points in the whole range of his labours where his reiterated lessons and illustrations can do so much good. He ought to vary the manner in which he presses this preventive moral tuition upon his pupils: he should attract them by anecdotes and examples; lead them by precepts, interrogatories, exercises; and ever and anon renew the subject during their total attendance at school, till habits of thinking and acting the reverse of the unfavourable here referred to, shall have taken fast hold of their minds. The benefit to another generation of steady and unceasing attention to this one department of the Infant School teacher's duties, is incalculable.

*The Love of War, and Passion for Military Glory.*

This prejudice may be lessened in after-life, by a judicious treatment of the subject, in as far as the infant mind can comprehend it, which shall place aggressive war in its truly criminal light, and connect military foppery with all its evils, while genuine bravery will be inculcated, solely as characterising the *defence* of our country. Perhaps just views on this subject are for a more advanced period of education; but in every subject where the infant mind forms ideas at all, these ideas, so far as formed, may be conducted right quite as easily as wrong. *The prejudice may be kept out.*

*National Self-sufficiency, and Antipathy.*

An early inculcation that all mankind, as the creatures of one Creator, are brethren, notwithstanding of the division of the human race into different nations, speaking different languages, and having different aspects, colours, manners, and customs, will form a most important lesson. The impartial allotment to all nations of some advantages

denied to others ; the folly and error of national pride and vanity ; and the wickedness of fostering enmity, should be much dwelt upon. If ever the senseless, as well as wicked, phrase, "*Natural enemies*," is repeated to the children, it should be to mark it for their reprobation. A respect for, and good-will towards, other nations, which may subserve the most important ends to the whole human race, may be begun at the Infant School ; and lessons on the advantages of the freest commercial intercourse may be easily and familiarly illustrated, and rendered a habit of thinking. The folly and injustice of imputing an unfavourable character to a whole people, often because of knowing some individuals whom we disliked, should be made manifest ; while all degrading epithets applied to other nations should be discouraged, as Yankee for the Americans, Paddy for the Irish, and others.

### *Religious Bigotry and Intolerance.*

This most unamiable and most unchristian habit of mind, may be anticipated, in earliest infancy, by the judicious inculcation of a more liberal spirit. The children of different religious persuasions will probably meet in the same infant school. They may respectively be made to understand that their parents do not agree in some particulars, and that this difference is too apt to engender ill-will, and even hatred. One goes to this church, and another to that ; should this occasion a quarrel between them ? Long before they can judge of the grounds of religious differences, a disposition to view them without connecting them with odium, may be planted in the minds of the children, and, if nothing is done afterwards to uproot it, it may have the most benignant influences on society.

### *False Sayings.*

That a man has a rib less than a woman. That the

tenth wave of the sea is more dangerous than the other nine. That all animals on the land have others like them in the sea. That the ocean has no bottom. That the winter is cold because the earth is farther from the sun. That ignorance is bliss. That men of business have no time for study. That ignorance excuses crimes. That the rich are always happy. That God sends the meat with the mouth—(as an excuse for improvident marriages.) Such, and many other absurdities, prevent the mind from reasoning soundly on any subject. A judicious teacher may anticipate and exclude all such notions.

*Self-sufficient hasty Judgment.*

This nuisance in human intercourse would seem to admit of, as well as require, the earliest prevention. Even children may be made to understand and despise the prompt and uninquiring manner in which the great majority of persons decide every question, however difficult, that comes in their way. They may be exercised with points and questions; and when their opinions are asked, they should be cautioned to take time, and checked for conceited or dogmatic forwardness. They should be told well-contrived incidents, where the rash and conceited subject themselves to ridicule, and even worse; shown how prevalent the weakness of prejudging is; practised in the habit of reflecting deliberately before they condemn or approve, and made to see practically what it is to demand and examine evidence and proofs, and how necessary it is to hear both sides in a dispute. This incipient spirit and habit of candour, fairness, and deliberate consideration, carefully attended to in infancy, and exercised in after-education, could not fail, were it general, to produce the most beneficial effects on human affairs. The forwardly conceited and dogmatic should be specially marked by the teacher, well examined upon his grounds of judgment or positive averment, and his vanity and ignorance unsparingly exposed.

*The Spirit of Contradiction.*

Closely connected with conceited haste in judgment, is the tiresome habit of *always differing*. To whatever is stated, either as matter of fact or opinion, some children say "No;" and often, nay, almost always, without an instant's reflection, and generally without any stateable grounds. Never let the *contradictor* escape without a thorough interrogation *in public* as to his or her reasons for contradicting. The result will almost always be humiliating, the best way in which the offence can be made to punish itself. Illustrate the weakness by incidents and anecdotes, and show that it generally comes from despicable pride and vanity.

*Exaltation of every thing connected with Self.*

That every thing that belongs to ME is superior to what belongs to others, for no better reason than that it is MINE;—that every thing I am even connected with, derives importance therefrom;—that MY country is before all others in civilisation, grandeur, and power;—that its soldiers beat all other soldiers in battle;—that its horses, its very dogs, outshine all other horses and dogs, and so forth, ought to be ridiculed as nonsense by the teacher, and a fair judgment of other persons, other things, and other nations, presented for habitual contemplation.

*Conceited Depreciation—The Pococuranté Spirit.*

This pitiful manifestation of pride and vanity will show itself even in infancy, though it is more marked in after life; children, for the most part, being easily pleased. Do what you will for some people, they are too proud to own themselves pleased; it were to lessen their consequence—to descend to the herd that know no better—to acknowledge that one has been meanly bred, and unac-



customed to high gratifications and great things. This goes sometimes to a ludicrous extent, and infects, more or less, whole nations. The people who reside in remote and secluded districts, are often observed to be peculiarly characterised by it. A boy from the Highlands of Scotland was suddenly transported to Edinburgh, and some pains were taken to show him every thing interesting and attractive. Each novelty was observed to startle him; but he seemed to check the natural feeling, and instantly to regulate his manner to indifference, or a very faint expression of satisfaction. He was tried with the theatre, but was proof against its utmost splendour, and all its wonders to a young mind. Not that he was incapable of feeling astonishment and delight; these he did feel, but he was never off his guard on the point of keeping up his consequence, by avoiding the shadow of an admission that he had not been accustomed to as good as he saw!

Voltaire satirizes this silly weakness when he makes *Candide* exclaim, with regard to a personage who was magnificent in that particular way, "What a great man that *Pococuranté* must be; nothing can please him!" As the character is most unamiable, and excites strong feelings of disgust and dislike, especially when pains without success are taken to please, it should be carefully pointed out to the young, illustrated by incidents, and judiciously exposed when detected in any of the children themselves. The term employed by *Candide*, which is much used in English, might be remembered by the children; the good of which would be, that, through life, they would associate the character with the singular term, as a subject of ridicule. Adults have become ashamed of the weakness, by being denominated *Pococurantés*. Dr Henry, the historian, inscribed over the door of a summer-house in his garden, in which he often studied, "Be easily pleased." Those who are so, greatly enlarge the bounds of their own happiness.

*Pride and Vanity Defeat their own End.*

Impress this truth upon the children, and never tire of illustrating it. Explain the feelings as selfish and unamiable, and, as such, particularly calculated to excite hostility in others, who will delight to aid in the mortification of both. Children, and even adults, who are proud and vain, are ignorant that they are thereby travelling in the wrong road to either distinction or commendation. Explain the difference between the two feelings. *Pride assumes, vanity begs; the proud are defied, the vain despised*; and both are disliked as selfish. Show that estimation and proper distinction come of real merit, intellectual and moral, and that far beyond what the proud and vain even picture to themselves. Judicious anecdotes should be employed to render both weaknesses ridiculous. Again, let care be taken that this point is not passed over slightly. It need not be added, that nothing should be done in the school to foster or encourage the evil, as is most unthinkingly done by places and prizes.

*Jealousy—Grudging—Envy—Detracting.*

It is difficult to mitigate, and next to impossible to eradicate, those base feelings in the lower class of minds, which have a tendency towards them. But their baseness, at least, may be made well known, and perseveringly illustrated, and their self-defeating tendency practically exemplified. These unamiable traits of character are not sufficiently marked to those afflicted with them. They are allowed to indulge the feelings in ignorance of their folly, as well as their debasement. The appearance of them should be narrowly watched by the infant school teacher, especially in the unrestrained intercourse of the playground. The essential element of injustice which jealousy and envy include, should be made apparent by incidents, narratives, and all the practical examples that

occur. It is very apparent in *competitors*, as two candidates, or two shopkeepers. Each, however, bitterly complains of the injustice *he* suffers from it. Here the rule "*Do to others,*" &c., should be brought forward, as it may be on many other occasions. Detraction will show its ugly features even among infants. Let it not be spared.

### *Obstructing and Injuring Opponents.*

An early disposition to fairness in the contests of life may be laid in the infant school ; and violence, and personal or other outrage, called forth because of difference of opinion, in after life prevented. It is not to be expected that the children can be made aware of what is called the right of private judgment in politics and religion ; but much may be done by a judicious teacher to commence in their minds a candid and fair feeling towards each other's preferences, tastes, &c., and to elicit their reprobation against any one who should attack, hurt, or injure any of themselves, when on their way to do what they are entitled to do. The criminality of the violence perpetrated at an election may be made plain to them, and a horror of it implanted, which, cultivated in after education, will render such scenes rare in another generation. They occur now, not only because the actors in them have never heard of their baseness, but because they have been *educated* to consider them legitimate, and even praiseworthy.

### *Want of Candour.*

Mankind are uncandid and unfair in many ways, and the habit cannot be too soon watched and prevented.

1. They too readily believe and circulate evil reports of others, and justify themselves by saying what is often false, that the report could not have arisen without *some* foundation. It is a gross violation of duty to our neighbour to increase the circulation of evil against him, when we have

no evidence of its truth. The generous mind is slow to believe evil. Duty calls for exposure, however, to prevent greater evil. To feel pleasure, as is too common, in the misfortune, degradation, or misconduct of others, deserves no softer term than diabolical.

2. They impute bad motives to others, too readily, and that even to *good* actions; while for their own *bad* actions they are most ingenious in finding good motives.

3. They are uncandid in judging of the statements and arguments of others. How few in a controversy are perfectly fair to their opponents, and do not exaggerate, or colour, or in some way misrepresent their views, while they resent warmly a return of the same treatment!

4. They do not respect the feelings of others, but often deeply wound a sensitive mind by coarseness, haughtiness, and severity.

5. They depreciate each other's talents and merits, and that generally with the view of advancing their own reputation.

Very young children will show symptoms of these low feelings, and, at least, should be made well aware that they are besetting sins of human nature.

*Tyranny—Annoying the Imbecile—Provocation—  
Derision.*

To many dispositions it is positive pleasure to oppress and tyrannise. Watch the first manifestation of this tendency. Its exercise implies the possession of relative power: a child of three years is more powerful than one of two. It is not seen in the intercourse of equals, for there is a balance of power to resent and avert it. The cowardice of the practice should be clearly shown forth, whenever the stronger oppresses or beats the weaker; the fact should be made public, and the offender asked how he would feel the tyranny of an older child than himself. Let no child tyrannise ignorantly; encourage kindness and protection from the strong to the

weak; and, of course, keep a strict eye on the play-ground in this particular. The cruelty of annoying idiots, and other weak persons, should be much dwelt upon, and a spirit of protection towards them encouraged. An instance of the practicability of this is given in the Appendix, No. I. Nothing is more common among children, and adults too, and more productive of quarrels, than insolent provocation and derision. The youngest child feels it acutely. It requires the most careful watching, for it has spoiled many a disposition. Ridicule, besides the cruel annoyance it occasions, discourages praiseworthy exertions, and often withers every good purpose. Exercise the children on this head by the rule of "*Do to others,*" &c. Mimickry should be checked.

*Frightening—Practical Jokes—Witches, Ghosts, &c.*

These malpractices of school require much watchfulness, and none have received less. Consequences which may be characterised as little short of fatal, have sometimes resulted from them. It is impossible to describe the suffering of a timid child when plans are laid to terrify him; indeed, there are instances of idiocy being produced by them. Practical jokes have often landed their victims for life. Secretly withdrawing a seat on which one is sitting down, has been the means of a blow on the lower extremity of the spine, which has produced paralysis. A push down stairs has fractured a bone. Now, as in both the practice of frightening and practical joking, ignorance is the common excuse, let that ignorance cease. If the offences occur among the children, seize the opportunity of explanation on the subject; and even if they do not occur, bring them forward in anecdotes, and be satisfied that they are quite comprehended. Treat the nonsense of witches, ghosts, &c., with contempt and ridicule, as weaknesses too great even for babies; and advise the children to laugh at all who believe in them, and tell them the Infant School-

done away with all such nonsense. It may be said that to agitate the subject is to put evil into the heads of the children. If we could be assured that no one else would put the evil there, there would be force in the objection; but we may be certain it will be put there in its hurtful form, and therefore ought, like many other noxious notions which the young are apt to imbibe, to be anticipated, and treated as a baseless absurdity.

### *Superstitions—Gambling.*

This subject is suggested here by that of witches and ghosts. It is astonishing to how great an extent, at least a *practical* belief in *dreams, charms, omens, lucky numbers, misinterpreted coincidences, presentiments of evil, fate, &c.*, still continues to disgrace society, not merely in the humblest and most ignorant, like sailors who nail a horseshoe to the mast to prevent shipwreck, but in what are called the educated classes. The ticking noise of an insect is called by many the *dead-watch*, the howl of a dog is supposed to portend evil, ill luck is foreboded to a journey begun on a Friday, from ringing in the ear, upsetting the salt-dish, breaking a looking-glass, a present of a knife or cutting instrument, and many others. The best way to cure all that sort of nonsense, is to pre-occupy the infant mind with a due contempt for it, *by bringing it well forward* in lessons and anecdotes, (for concealment of it, as in the preceding case, is leaving it to be inculcated by the superstitious,) and comparing it with the true and rational course of natural events, as arranged by the Creator, and made much to depend, in so far as man is concerned, upon a strict obedience to His natural laws, moral and physical, by ourselves. These preclude *chance, fortune, and fate*, which are mere words, and, for their mischievousness, it were well that they did not belong to our language. As soon as they can understand it, tell the children some anecdote about a silly girl who ruined her happiness by marrying a notoriously bad

man, and excused her conduct by saying that she *felt* she was *fated* to do so ;—in other words, that she mistook her own ill-regulated inclinations, for a necessity over which she had no control. She was never fated to put her hand in the fire, or do any thing she disliked. It is not very likely the children will *gamble*. Watch it well ; even the semblance of its introduction in any guise whatever. By every means, impress them with a sense of its moral impropriety and dangerous consequences.

### *Cruelty and Antipathy to Animals.*

Many children are cruel to animals from inattention and ignorance, and not from a cruel disposition. The little boy, who, when reproved by his mother for pulling the legs from a many-footed insect, answered that he had left it *plenty*, sinned in pure ignorance. The infant mind cannot be too soon enlightened on this subject, and made to know that the minutest insect suffers torture as well as himself. Exercises, illustrations, anecdotes, and all manner of practical inculcation of mercy, kindness, and gentleness to animals, should never cease in an Infant School. The ordinary cruelties to horses, asses, cattle, sheep, and other animals, should be described to them, that they may know and feel them by sympathy ; and during all the four years of their attendance at school, a due abhorrence of such practices should be strengthened.

Nothing has been done to counteract causeless antipathies to certain animals, and the instant impulse to *kill* them wherever they appear. This is much fostered by the prevalence of cruel sports. Every thing like *game*, feathered or furred, we must knock down and *kill* whenever we see it. Ought this to be, especially when the blow is merely wanton, and we are not driven to *kill* for food ? Some animals are noxious in certain situations, such as rats and mice in our houses, and it is *un*reasonable to kill them there, if we cannot, by any *more* merciful means, get rid of them ; but why should we

slaughter the rat or the mouse *wherever* we see it? In some situations, rats are most useful; they are the most effectual scavengers of the drains and sewers of a great city, and both prevent them being choked up and becoming pestilent. The usefulness of animals held noxious should be ascertained and unfolded to the children, and the generally prevalent spirit thus abated. Pets are useful in Infant Schools.

### *Destroying Inanimate Things.*

This miserable habit is imputed as a national reproach to the mass of the people in the three kingdoms of Britain and Ireland; and with too much justice. Infant training alone will remove the stigma from succeeding generations, and great pains should be taken to effect it. There is a loud demand to open museums, parks, gardens, &c., to all classes of the community; but till the destroying spirit is cured, the thing is impossible. The Legislature may pass acts against 'malicious mischief,' and the wanton destruction of growing woods, milestones, ledges of bridges, &c.; but the evil will only be cured by infant training. The practice, like others above mentioned, is an ignorant one. The difference in this particular between the French and Italians, and us, is simply this, that the children in France and Italy are trained to respect and admire statuary, architecture, public gardens, &c. Nothing would be easier than to give the same bent to the infant mind in this country. The playground should be ornamented, and its frailest ornaments made sacred; and this is done with such success, that the children of an infant school may be admitted into public gardens, museums, &c., with perfect safety. Gentlemen who have offered their parks to the public, have been forced to withdraw the privilege, from the wanton destruction and defilement to which they were exposed. Let this be told to the indignant gallery of an infant school, and again and again pressed on their atten-



tion. Encourage taste and refinement, and even a little ornament, for application to their own dwellings.

### *Stone Throwing.*

This mischievous and dangerous practice, which comes from the same wanton and destructive feeling as the preceding, ought to be most especially watched by the infant teacher, repressed when it appears, and its effects explained to the children. A stone ought never to be lifted at all, or be carried in the hand ready for use; and, above all, should never be directed against persons, animals, or things, as is almost the constant practice with neglected or ill-trained children.

It was omitted in its proper place; but one of the maxims hung upon the walls of an Infant School should be—NEVER THROW STONES.

### *Nuisance and Nastiness.*

We need not enlarge on this topic. The detestable negligence with which parents are chargeable on this head, the carelessness of others' comfort which they evince in permitting their children the range of the roads and footpaths, must be counteracted in the children, for the improvement of themselves and *their* children, and reprobation of all indelicate and foul habits pressed upon their attention. Infant school children are a pattern in this respect.

### *Want of Consideration for Others, and of Civility.*

This is a wide chapter in human life, and there seems no other definition of it, than the unceasing operation of selfishness in minor matters, of which the selfish are only made aware when they themselves suffer by the vice in their neighbours. The inconsiderate of others are careless of the consequences of their own acts or negligence.

to their neighbours or fellows ; they will leave your door open without reflecting that a thief may enter and plunder your house ; they will take the use of some implement which you cannot do without, and put you to great inconvenience by not returning it to its place when they are done with it ; they will help themselves at a meal, and forget to pass the dish to their neighbour, &c. The beginning of a practicable remedy for these unamiable habits, is to call attention to them, to make the young well aware of them, and of their selfish and really unjust origin. Success will be various with different dispositions, but with all something may be done, and not only consideration of others' wants, feelings, and even pleasures, but practical civility and benevolence rendered habitual. All noisy, boisterous, petulant, and impudent behaviour should be proscribed, and its effects on the offender himself, as well as on society, made apparent.

#### *Evil Speaking and Gossiping.*

This is a mighty mischief in society, and is one of the grossest violations of the golden rule, 'to do to others, &c. Let instances of it which occur among the children be well marked and investigated, and held up to reprobation, till the habit is formed of refusing to believe unfavourable reports of others, and abstaining from giving them circulation. A judicious teacher may do much good in this. 'Judge not, that ye be not judged,' should be a prevailing text in an Infant School. The circulator is only less criminal than the inventor of slander.

#### *Pleasure of Exercising the Benevolent and Just Sentiments.*

It is quite practicable, by illustrations and instances, to impress upon the minds of infants, that our better feelings are not merely regulators of our passions and inferior propensities, but a rich source of *positive* pleasure. The

children may be fully and practically impressed with this truth, by the time they have been four years in a properly conducted infant school. It is a truth almost new to society. Religion itself has been taught as if it constituted the exercise of justice and mercy mere duties; yet there are ample grounds in the sermon on the Mount to entitle the teacher of the young to recommend them as pleasures, and those of the highest order. A teacher who is not thoroughly imbued with this view of the higher feelings of man, is not yet fit for the care of an infant school.

*Prudential Attentions—Temperance.*

These should be much pressed on the children. 1. Care of fire, both with regard to the child's own person, and his dwelling. Instances of carelessness in both, narrated. 2. Importance of fresh air to the lungs and blood, and consequently the health; effects of foul air. 3. Ventilation of the school-room, of a dwelling-house, bed-clothes, &c. 4. Effect of muscular exercise on the health. 5. Importance of cleanliness in person and dwelling. 6. Early impressions of independence, and of the importance of making provision in youth for age, with disdain of charity or parish aid. 7. Importance of sobriety, with the miseries, physical and moral, of intemperance. On this vital subject, the lessons, illustrations, and incidents, should be very frequent, so that an impression may be made *against* the practice of spirits-drinking, founded on a knowledge of its fatal effects. Multitudes who addict themselves to drinking, do so in ignorance,—nay, they are led to it by others, under the belief that it is a wholesome invigorating practice. Specific lessons should be given, and examinations held upon its physical effects—its moral effects—its destruction of character and the peace of families—its consequences to society in fires, shipwrecks, and other occasions of loss of life and property, in the crimes it occasions, &c.

## **APPENDIX.**

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## APPENDIX.

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### No. I.

#### EFFECTS OF MORAL TRAINING IN THE EDINBURGH MODEL INFANT SCHOOL.

- I. Incidents to show the good effects of exercising kindness and consideration for others, in opposition to reckless mischief, hard-heartedness, and cruelty; vices which render the lower orders dangerous and formidable.

1. Two of the children, brothers, about five and four years of age, coming one morning late into school, were to go to their seats without censure, if they could give an account of what they had been doing, which should be declared satisfactory by the whole school, who should decide. They stated, separately, that they had been contemplating the proceedings of a large caterpillar, and noticing the different positions of its body as it crossed their path—that it was now horizontal, and now perpendicular, and presently curved, and finally inclined, when it escaped into a tree. The master then asked them abruptly, "Why did you not kill it?" The children stared. "*Could* you have killed it?" asked the teacher. "Yes, but that would have been cruel and naughty, and

a sin against God." The little moralists were acquitted by acclamation ; having, infants as they were, manifested a character, which, were it universal in the juvenile population, would, in another generation, reduce our penal code to a mass of waste paper, in one grand department of its bulk.

2. The teacher mentioned to the children one day, that he had been occupied about a boy and girl who had no father or mother, and whose grandfather and grandmother, who took care of them, were bedrid and in great poverty. The boy was seven years of age, too old for the Infant School, but some gentlemen, he said, were exerting themselves to get the boy into one of the hospitals. Here he purposely stopped to try the sympathies of his audience for the girl. He was not disappointed ; several little voices called out at once, " Oh, master ! what for no the lassie too ? " He assured them that the girl was to come to the Infant School, and be boarded with him and Mrs Wright ; and the intelligence was received with loud plaudits.

3. One day when the children were in the playground, four boys occupied the boys' circular swing, while a stranger gentleman was looking on with the teacher. Conscious of being looked at, the little fellows were wheeling round with more than usual swiftness and dexterity, when a creature of two or three years made a sudden dart forward into their very orbit, and in an instant must have been knocked down with great force. With a presence of mind and consideration, and with a mechanical skill, which to admire most we know not, one of the boys, about five years old, used the instant of time in which the singular movement was practicable, threw his whole body into a horizontal position, and went clear over the infant's head ! But this was not all ; in the same well-employed instant, it occurred to him that that movement was not enough to save the little intruder, as he himself was to be followed as quick a thought by the next swinger. For this he provided by

dropping his own feet to the ground, and stopping the whole machine, the instant he had cleared the child's head! The spectator of this admirable specimen of intellect and good feeling, which was all necessarily the thought and act of a moment, had his hand instinctively in his pocket for a shilling; but was stopped by the teacher, who disowns all inferior motives for acts of kindness and justice. The little hero, however, had his reward; for the incident was related by the teacher in full school, in presence of the strangers, and was received with several rounds of hearty applause.

4. J. J. accused H. S. of having eat up his, J. J.'s, dinner. It was proved by several witnesses that H. S. not only appropriated the dinner, but used force. The charge being proved to the satisfaction of the *Jury*, (the whole school,) the same tribunal were requested by the teacher to decide what should be the consequences to the convict. One orator rose and suggested, that as H. S. had not yet eat his own dinner, he ought to give it to J. J. This motion, for the children always welcome any reasonable substitute for corporal punishment, was carried by acclamation. When one o'clock came, and the dinner was handed over, *coram publico*, to J. J., H. S. was observed by him to be in tears, and lingering near his *own* dinner. They were by this time nearly alone, but the teacher was watching the result. The tears were too much for J. J., who went to H. S., threw his arms round his neck, told him not to cry, but to sit down and take half. This invitation was of course accepted by H. S., who manifested a great inferiority of character to the other, and furnished an example of the blindness of the unjust to the justice of retribution, which *they* always feel to be mere revenge and cruelty. He could not bear to see J. J. even sharing *his* dinner, and told him with bitterness that he would tell his mother. "Weel, weel!" said the generous child, "I'll gie y'd a' back again." Of course the teacher interfered to prevent this gross injustice; and in the afternoon made their schoolfellows com-



pletely aware of the part each had acted. It is not easy to render a character like that of H. S. liberal; but a long course of such *practice*, for precept is impotent in such cases, might much modify what in after life would have turned out a selfish, unjust, and unsocial character.

II. Incidents to show the good effects of practically exercising honesty and truth, to the end of superseding another branch of criminal jurisprudence.

1. One of the children lost a halfpenny in the playground. The mistress was so certain that it would be found and accounted for, that she lent the loser a halfpenny. Some time after, when the incident was nearly forgotten, one of the boys, J. F., found a halfpenny in the playground, and although no one saw him find it, he brought it at once to the teacher. As the latter knew nothing about the loss of the halfpenny already alluded to, it appeared to him a halfpenny without an owner; but one of the children suggested that it must be the lost halfpenny for which the mistress had given the substitute. "What, then, shall be done with it?" Many voices answered, "the mistress should get it." The girl who had lost the halfpenny was called out, and at once knew her own. It was given to her, and she immediately transferred it to the mistress. The teacher then appealed to the whole school. "Is that right?" "Yes! yes! right! right!" was called out by the whole assemblage, with much applause and animation. This last accompaniment of their approbation is strongly contrasted with the more tranquil and evidently regretting way in which they condemn, when any thing is wrong.

2. A penny was found in the playground, which had lain so long as to be mouldy and rusty. It was held up for an owner, but claimed by none. "What shall we do with it?" "Keep it, master, keep it." "Why should I keep it; I have no right to it more than any one here." This was puzzling to all, till a little girl, not four years

old, stood up and said, "Put it in the box." Many voices seconded this excellent motion, and the master referred it to a show of hands; up went every hand in the school, most of the children showing both hands for greater certainty, and the penny was put into the subscription-box, amid cheers of exultation and delight.

3. Immediately before the vacation in August 1830 three boys plucked a few black currants, which had ripened on the playground wall; fruit and flowers being cultivated to exercise self-denial and refinement in the children. One of the boys kept to himself double the quantity which he vouchsafed to each of the other two, but gave a part to a fourth boy, who had seen the transaction, evidently to purchase his silence; but thinking this hopeless, he took back the gift, and struck the boy to give it up, remarking, that as he knew he would *tell*, he, the speaker, need not lose his berries into the bargain. They all confessed, and expressed their sorrow, except the striker, decidedly in all respects the most guilty, who maintained a bold and hardened countenance. The voice of the school was, however, merciful to them all, which so much affected the last-mentioned offender, that he burst into tears. A clergyman, one of the directors, was present; the boy caught his eye, and instantly brushing away his tears, joined in the hymn which was sung at the moment. He staid behind the rest, assiduously assisted the master to put away the things, a civility he never showed before, and begged to shake hands with him when he went away,

4. P. M. was brought to solemn trial, before the whole school, for keeping up a penny of his weekly school-fee. After the trial and award, which were both just and judicious, the teacher asked the school, "How many of us have been tried now?" A voice called out, "J. H. has been tried." This was indignantly denied by J. H. The teacher, turning to J. M., asked him if he had ever been tried? He hung his head, and answered "Ycs." "What was it for?" "Master, do you not remember

yourself?" "I do; but are you any the better of your trial and punishment?" "I've never stolen since, any how." "What was your reason for not stealing?" "I listened to the *thing in my breast*, and that told me it was a crime?"

J. M.'s offence had been watching, all the time of school, a penny-piece which had been dropped under the stove, and secretly appropriating it when the school was dismissed. His confession bore that his first purpose was to buy bowls (marbles), but he felt so unhappy that he could not make up his mind to *look upon* what he should purchase, and formed the singular resolution to expend the money in something eatable, that he might get it out of his sight! This he did, and gave a share to a schoolfellow. He was asked whether his conscience did not upbraid him? He answered, "It did not speak very loud at first, but I grew very unhappy, and was happier after I was tried and punished." His contrite tears moved the compassion of his numerous judges, who wished to have spared him; but this was not admissible in the circumstances, and a few pats on the hand was the form of corporal punishment allotted him. He was sorely tempted, for he confessed that he kept his eye on the penny-piece for two hours before he took it.

5. The following incident was communicated by a gentleman from England, Dr Harrison Black, who, in company with the Chevalier de Frasans, Judge of Assize under Charles X., witnessed the whole occurrence, and spoke of it with much interest:—The master was suddenly called into the playground, in consequence of a cry that one boy had struck another on the forehead, so as to make the blood flow; all the children were immediately called in, and inquiry made as to who had been witnesses of the affair. Those who presented themselves were sent into an adjoining room, and the injured party desired to state his grievance. He simply said, "I had 'struck him with a spade,' (which had for a moment been left by a workman,) and that he did not believe it

had been done on purpose. The offending party being called, said, "J. M. had told him that he could not lift up the spade, and in trying to show that he could do it the blow was given." The witnesses were called in, one by one, and gave their testimony with great clearness, particularly a little Quaker girl. They all corroborated the statement of the accused party.

The teacher then asked of the whole assembly of children, "What punishment ought to be awarded?" The general cry was, "Three palmies," (*i. e.* three pats upon the palm of the hand,) because that punishment had been a few days before awarded to H. S. But one boy rose and exclaimed, "No, that is not fair, for H. S. told a falsehood about the fault he had committed, and T. B. did not tell any falsehood!"

The justice of this remark seemed to be generally understood, and part only of the punishment was determined upon. The culprit was then reminded, that although the blow had not been given intentionally, still he had broken a law which forbade all the children to touch the tools of the workmen, and was made sensible that the punishment was not inflicted because the teacher was angry, but because he, T. B., had broken a law. The truth of this the little offender fully acknowledged to the bystanders, as well as to his master and schoolfellows. The punishment actually inflicted was a gentle tap upon each hand.

Hereupon a new and unexpected scene arose, the *offended party*, seeing that all around concurred in condemning the offender, cried out, "I'll find a coachman's whip, and lash him." This gave occasion to another appeal to the children as to the injustice of this threatened second punishment, and ended by the threatener being made sensible that all present were now against him. As a proof, he said, "Don't be frightened, Tom, I'll not whip you, or tell my father." It appeared that ~~he~~ had been so short a time in the school, as not to have

become imbued with the governing principles of the place.

7. A little boy came to school with his hands covered with paint. He applied to the teacher's sister to aid him in his extremity, which she did effectually by dint of hot water and soap. He promised to reward her with a halfpenny whenever he should get one. She, wishing to try him, asked him some days afterwards if he had forgot his promise. He answered, No, but that he had put the first halfpenny he had got into the poor's plate at church. Having soon after got a halfpenny from a lady, he rung the teacher's house-bell, and gave the money to his creditor, who took it, but, after some days, restored it.

### III. Proofs of the success of the System, in its fundamental principle of governing by Love, and not by Fear, and that consistently with the most perfect order and discipline.

1. The master one day intimated that he wanted a number of articles, of a kind which he enumerated, to illustrate the lessons. He was next day inundated with all sorts of odds and ends, every child bringing with him something—leather, feathers, cloths, silk, stones, wood, glass, &c. &c.

2. Accidentally saying that he would come and visit his pupils at their own homes, and if he did, how would they entertain him, the question was answered by a burst of hospitality, and the number and variety of the articles of cheer enumerated were too much for his gravity. He observed, however, that *whisky* was *not* among the temptations offered him, in the competition for the preference of his company.

3. A parent came one day to the school expressly to be satisfied on the puzzle, as he said, it was to him, *how* a *schoolmaster* could render himself the object of *love*. His own was always the object of terror; and, instead of running to him when he appeared, he and his school

mates went off in the opposite direction, with the greatest alertness. His boy, he said, runs to the master whenever he sees him, and is proud to come home and tell that he has shaken hands with Mr Wright, of whom, as well as Mrs Wright and Maggy (the latter a worthy of three years old, the master's child, who sets an example to the whole school), he never ceases to speak.

Mr Wright requested the inquirer to remain, and see how he treated his scholars. He did so, and witnessed the kindness, the cheerfulness, and the fun which never flags, while he saw discipline and obedience at the same time. The children went to the playground, and, to the amazement of the visiter, the teacher ran out, crying, "Hare and hounds! hare and hounds!" Taking the first character on himself, he was instantly pursued full cry by the whole pack, round and round the playground; at last he was taken, and worried by a vigorous act of co-operation. In his extremity, he rang his hand-bell for school; instantly the hounds quitted their prey, rushed into school, the door being scarcely wide enough for them, and were within a minute as still as a rank of soldiers, seated in their gallery, and busy with the multiplication table. The visiter went away with a shrug, muttering, "Na, the like o' that I ne'er saw!"

Many pages might be filled with anecdotes illustrative of the beneficial effects of the system in preventing the numerous fears, follies, envyings, discontents, and prejudices, which render the lower classes so intractable. The superstitious fear of ghosts, witches, &c. is practically removed. A person informed Mr Wright, that as he was crossing a churchyard, not without the habitual dread which, from his youth, he could not separate from the place, he met a little girl of five years old marching through all alone. "Was she not afraid?" "Not a bit: we learn at the Infant School that ghosts and all that is nonsense." All dirty, gross, destructive, selfish, and insolent habits are proscribed, and carefully prevented; and, above all, *whisky* is held up as the greatest of curses to

society, and many a lesson is taught of its effects on both mind and body. The children heard, with much indignation, of a crowd in the street insulting a poor Turk,—of some boys who teased an idiot,—of the mob breaking windows on occasion of the illumination,—and of the people maltreating the doctors for their kindness in trying to cure the cholera.

The following incidents are extracted from the Society's second report in 1835.

A few incidents, selected as specimens from many, to show the continued working of the system, in exercising kindness, affection, truth, and honesty.

1. The children, having received many lessons on the subject of kindness to the weak and the imbecile, and the cruelty of unfeelingly persecuting them, had, about a year ago, an interesting opportunity afforded them of reducing to practice the precepts they had so often heard. A poor child, weak almost to idiocy, became a pupil. At an ordinary school he would have been made the butt of all his schoolfellows, who would have evinced their superiority by subjecting him to persevering ill usage. The teacher gave no particular injunctions to the children about the little new comer; but having soon observed that the children were aware of his imbecility, resolved to leave former lessons and kindly habits to work of themselves. It was observable that the little stranger's appearance and manner excited attention, and something of interest. He was at first cross and peevish, and pinched and struck some of the children; yet no attempt was made by them to resent this, as if any thing was to be forgiven to "Poor Jamie." He soon became a sort of pet, and there is a rivalry who shall "be best to Jamie." If Jamie wishes to exercise in the swing, a rope is at once readied to him;—if he wishes to build, the wooden bricks are at his command;—if he falls, a larger aid than usual is to raise him up. There prevails an anxiety that that

defective friend should not be left behind in the exercises, both within doors and without, and all sorts of examples and helps are offered to encourage him. Of course, his progress has been slow; but the teacher has watched the effect of kind and encouraging treatment on his mind, and it has been very satisfactory; he is now a pupil of a year's standing, and has made marked progress; his expression of countenance and whole aspect are improved, and nothing is more so than his temper; he is one of the happiest children in the school, and makes a delighted return to his generous little playmates by all manner of obligingnesses; he is a ready horse, either vertical or on all-fours, and has often a rider on his back—for he is rather a strong child—and has generally an *elite* about himself, engaged in unceasing play; indeed, there are two or three children who never quit him, and one, to whom he himself is so much attached, that when his little friend's dinner, as sometimes happens, is late of coming, Jamie is observed giving him a part of his; which debt is faithfully paid back when the expected dinner arrives. The poor child's mother reports that he is not the same creature at home he once was; his temper and habits are improved; and instead of the least, he is the most easily managed of the family. He is never so happy as at school, and is the first to come and the last to depart. His only *vice* is roguishly to hide himself at the hour of shutting-up, and enjoy being ferreted out and chased away by Mrs Milne. Perhaps the success of this case may suggest an advantage of Infant Schools not yet contemplated,—namely, as an asylum for the infant imbecile; whom the earliness of the culture may greatly improve, if it does not perfectly restore; at the least, they will be safe and comfortable, and in a very different condition than that in which they are too often seen, wandering the streets and roads. Hopeless fatuity is, no doubt, for other care; but the many cases like that now described, ought first to be tried in an Infant School.

2. F. G. shows his delight in school, and his benevo-



lence, by exerting himself to extend the pleasure he enjoys as widely as he can among his acquaintance who do not belong to it. It is, accordingly, not unusual to see him enter attended by one or two minute strangers, who come to see if all is true which their zealous friend has depicted. These inquirers not having, in the first instance, the concurrence of their parents, do not always re-appear, although they sometimes do ; but one little fellow at once took his place among the children, beside his introducer, and when his mother came to seek him, refused to go home till the school should be dismissed. The result was, that he was soon after regularly entered.

3. R. P. seeing in the school the zones of the globe distinguished by various colours, drew and coloured on a small piece of paper a very near resemblance of them ; showing this to his companions, one wished to have it, and another wished to have it, and he seemed quite disposed to gratify them all. Accordingly, for several weeks he was kept busy fulfilling their orders. His *gratuitous* trade was soon extended to flowers, houses, and animals ; and other children were induced by his example to draw a little too. Two in particular delight in their play hours to sketch on the slates, and make very recognisable likenesses of what they see on the walls.

4. A. G., a very little boy, with a smiling face, was detained for three months from school in consequence of sickness. On his return, two of the older boys mounted him on their shoulders and carried him around the playground, followed by a crowd of little ones huzzaing at their heels.

5. M. C., a little girl, and J. C., a boy, twins, both fell sick at the same time ; the girl died and was buried without the master knowing of the event. The little boy, who a short time survived, said to his mother—"Mother, you never told the master when my sister died ; but you must tell him when I die, and bid him come to the funeral."

6. Three of the children, when in the Meadows, found

a sixpence, and seeing an aged beggar, agreed to give it to him. As it was a considerable time after it occurred that the teacher heard of the incident, he could not find out what induced them to give it to the beggar, or what conversation they had about the matter; but it seemed to be quite true that they had found a sixpence, and thus disposed of it of their own accord.

9. W. B. was accused of having stolen an apple and a cake from a poor woman's stand at the foot of the Bow. The matter being *judicially* inquired into in school, he was found guilty and punished. His parents were informed of the matter, and told that it was also necessary that the woman should be paid; but rather than pay a penny, they chose to sanction the child's offence, and withdrew him from the school. This last incident is recorded, to show that an Infant School, although it does much, does not succeed in every case; and that debased parents are often the cause of its failure.

#### LETTERS FROM THE PARENTS (FIRST REPORT.)

In order to ascertain that the effects of the moral training were not a mere show at school, Mr Wright was directed to write a circular note to a large proportion of the parents, requesting their opinion, in writing, of the improvement of their children attending the school, in learning, manners, affection, obedience, health, and happiness. Above thirty answers were received, of which we can only give a very few as specimens, which we do at random. The originals may be seen by any one who chooses, at the Infant School. It may in general be remarked that there is a striking agreement among them in a zealous readiness to express, in strong terms, their sense of, and gratitude for, the advantages their children enjoy at school, and the improvement of their own comfort in their intercourse with their children at home. The delight of the children in attending school, and affection for the teacher, are mentioned in most of them.

1. DEAR SIR,—I can scarcely express to you how much my children have been benefited by your more than excellent mode of tuition. Whether the many improvements so perceptible in them proceeds from your own qualifications, or from the general system, I know not ; but this I know, that before my children attended the Infant School, they were slow, dull, and unmanageable ; they are now active, lively, and obedient. I am, &c.

(Signed) JAMES FORBES.

2. SIR,—I received your letter regarding the opinion I had formed of my son's improvement at the Infant School. I beg leave to state that it exceeded my utmost expectation ; and in answer to your questions, the Infant School system, so far from alienating the affections of the children to their parents, it increases them to a high degree, and makes them more obedient, and promotes greatly their health and happiness, and they are greatly benefited by the instructions they receive. I have also to return my sincere thanks for your kindness and indulgence to them. I am, &c. (Signed) MRS GRAHAM.

3. SIR,—I have the pleasure to inform you, that my child has improved in every respect. The affection of the child is not alienated from its parents ; it is more affectionate and obedient. The health and happiness of the child is greatly improved and much benefited by the instructions received at the school. I am, &c.

(Signed) JAMES FOGO.

4. DEAR SIR,—It gives me great satisfaction to inform you of the rapid progress the child is making under your care ; indeed it is wonderful for so short a time. Owing to your excellent method, she has acquired a taste for learning she never could get at home. She has forgot her playthings, and if the day be so bad that she cannot go to school, she either sings us a song, tells a story, or goes through part of her school exercises the best way she

can by herself. She often mentions some part of Scripture, although she is only five years old. I assure you, Sir, her love and respect for her master is great. I think, Sir, all this will give you pleasure to hear, and with good wishes for the improvement of the children, and thanks for what has already been done. I am, &c.

(Signed) CATHERINE ROBERTSON.

5. SIR,—I am really delighted with my son for his intelligence since he went under your tutorage; and I altogether approve of Mr Wilderspin's system of treating children, and in my opinion, it is not only now, but in future years, it will be instilled in his memory. And you, Sir, I am convinced, have done your duty, from the affection that he has towards you, for he is always speaking about Mr Wright, or giving us a recital of the useful information you give him; and so much I approve of the system, that I am going to send another boy of mine as soon as the days get a little longer; and please accept of our best thanks for your attention to our son. I am, &c.

(Signed) THOMAS WATSON.

6. SIR,—With regard to our son's morals, we think them very much improved, for he has a true sense between right and wrong, and the greatness and goodness of God. His intellectual parts are as far advanced as we could expect in the time he has been at school, and we by no means think his affections alienated from us. As far as our judgment can direct us, we think it must be a great benefit to society. I am, &c.

(Signed) JAMES THOMSON.

Many of the other letters are both well written and worded, and all of them are interesting and satisfactory.\*

\* Mrs W. did not write, but called at the school to bear her own testimony to her boy's change of character since he attended the school. She said he was previously a stubborn wilful boy, and took twenty biddings. He now obeys for one, and that cheerfully.

## LETTERS FROM THE PARENTS (SECOND REPORT.)

1. SIR,—My son James John Dundas Watson, has attended your Model Infant School since September 1832. Of the moral and religious instruction he has acquired, I cannot speak in too high terms. He has improved, or, in other words, greatly changed in his natural disposition; he has, besides all, acquired notions of neatness, regularity, cleanliness, docility, and self-denial: all which improvements I attribute to your system of infant training. He is extremely fond of school; in short, he has learned more than I ever thought a boy of five and a half years could have learned. I have another son only ten months old, and so well pleased am I with their treatment, that so soon as he is able to walk so far, he shall be sent. I am, &c.

(Signed) W. WATSON.

2. DEAR SIR,—I have the greatest pleasure in bearing testimony to the good effects produced by the system of training adopted at the Model Infant School upon the conduct of the children, as I had a boy, John, who attended from May 1831 to May 1834. His sister has attended since July 1832 till the present time. I have had many opportunities of observing its good effects, and I think I only express the opinion of every one who has had an opportunity of knowing how much a child can learn, and how they are improved in every respect. Their love for home and school makes it easy to persuade them to keep from the street and from bad company; they never need any persuasion to go to school. The principles of obedience, affection, obligingness, peaceableness, cleanliness, regularity, honesty, and truth, instilled into their minds at school, have a visible effect on their conduct at home. They take great delight in hearing parts of Scripture or moral stories read. The progress they make when sent to other schools, shows the advantage of their previous training. With my best wishes for the success of Infant

Schools, and my grateful acknowledgments to you and to Mrs Milne for your kindness and attention, and to all those who, under Providence, have been the means of bringing the system to such perfection, I remain yours, most respectfully,

ROBERT KAY.

*9th June, 1835.*

3. SIR,—In compliance with your request, that I should write you a few observations on the improvement of my children under your care, I beg to say that to me and their mother it is most satisfactory, particularly in speaking the truth, in love for school, and in hearing Scripture stories. I attend Lady Yester's church, and add, with pride and pleasure, that their conduct is most exemplary, and is often noticed. Of one thing I am certain, that at no school I could have put them to, could they have learned so much that is useful, and with so much ease and pleasure to themselves, as in the Infant School. I believe, Sir, you are aware that my dear little boy, who attended with his sisters, is dead : he was two years and four months old. During his illness, which lasted a week, his mother was frequently obliged to lift him from his bed to put on his shoes and bonnet to go to school. He had learned that pretty hymn beginning with "Here we suffer grief and pain," and it seemed the only thing that gave him pleasure, as I carried him about in my arms, and sang it to him a little before his death. I much regret you have not another school for carrying on your plan for older children. As Nancy is now seven years old, I wish to put her where she may improve fitting her age. Begging you to accept my best thanks for your kindness and care of them, and wishing you all prosperity, I remain, gratefully yours,

GEO. BECKWITH.

*13th June, 1835.*

4. SIR,—I am extremely pleased with the progress my son has made, yet truth obliges me to say that obedience is the only thing he fails in. I do not exactly say that

he wishes to disobey, but I think it is partly from an absence of mind, and that he is thinking on many things. At the same time, he is affectionate, kind, and also obliging: he is peaceable, and often complained of other boys, but said he would not strike again, as his master said they should not do it. He is particularly honest, and will not touch a thing that does not belong to him; and I can depend on his word in any thing he says. He loves his home, but is quite impatient when kept from school by the weather being bad: he then does not know what to do with himself. He has no wish to go about the streets, and is much displeased with hearing any person swearing or saying bad words. He takes great pleasure in moral stories, and the Scripture stories he has repeated, have both surprised and delighted us, as he seems to understand them better than we could have expected of him when double his age.

I can say little of my other child, as she has been much away from school, from being of a delicate constitution; but her progress seems to be in proportion to the time she has been there. I am, Sir, with sincere thanks for your attention, your most obedient servant,

*June 9, 1835.*

NATHANIEL PATON.

This little fellow is the artist mentioned in Case 3, of the preceding number of the Appendix. The teacher has remarked a certain want of attention, for a moment, to a matter commanded, which might be mistaken for disobedience.

5. SIR,—I take this method of informing you that I intend withdrawing my two sons, Andrew and George Goodall, from the Infant School, for the purpose of sending them to the Sessional School. I would consider myself very ungrateful did I not return my sincere thanks to you and Mrs Milne for your uniform kindness and attention to their best interests since they have been under your care. I trust that, with the blessing of God,

the seed sown will spring up and become a goodly crop. Deeply convinced as I am of the great importance of the instruction imparted in the Infant School, I hope that its benefits will be extended over a wider field, and that it may realize the expectations of its liberal benefactors. In the course of the ensuing spring, I shall send two of my younger children to your school, as the only proof that I can give of my entire approbation of the system. May you and Mrs Milne be cheered in your honourable but arduous duties with the consideration that He who spake as never man spake, said, "Suffer little children to come unto me, for of such is the kingdom of God." With the best wishes for your prosperity, and that of the institution over which you preside, I remain, Sir, your much obliged humble servant, DANIEL GOODALL.

This letter is of old date, and came unasked.

## No. II.

### SYMPTOMS OF DISEASE IN CHILDREN TO BE NARROWLY WATCHED, AS SUGGESTED BY MR WILDERSPIN.

It may, probably, be considered presumption in me to speak of the diseases of children, as this more properly belongs to the medical faculty; but let it be observed, that my pretension is not to cure the diseases that children are subject to, but only to prevent those which are infectious from spreading. I have found that children between the ages of two and seven years, are subject to the measles, hooping-cough, fever, ophthalmia, and the smallpox. This last is very rare, owing to the great encouragement given to vaccination; and were it not for the obstinacy of many of the poor, I believe it would be totally extirpated. During the whole of the time I superintended a school, I heard of only three children dying of it, and those had never been vaccinated. I always made a point of inqui-



ring, on the admission of a child, whether this operation had been performed, and, if not, I strongly recommended that it should be. If the parents spoke the truth, I had but few children in the school who had not been vaccinated: this accounts, therefore, for having lost but three children through the smallpox.

The measles, however, I consider as a very dangerous disorder, and we lost a great many children by it, besides two of my own. It is preceded by a violent cough, the child's eyes appear watery, and it will also be sick. As soon as these symptoms are perceived, I would immediately send the child home, and desire the parents to keep it there for a few days, in order to ascertain if it have the measles, and if so, it must be prohibited from returning to school until well. This caution is absolutely necessary, as some parents are so careless, that they will send their children when the measles are thick out upon them.

The same may be said with respect to other diseases, for unless the persons who have charge of the school attend to these things, the parents will be glad to get their children out of the way, and will send them, though much afflicted, without considering the ill effects that may be produced in the school. Whether such conduct in the parents proceeds from ignorance or not, I am not able to say; but this I know, that I have had many parents offer children for admission, with all the diseases I have mentioned, and who manifested no disposition to inform me of it. The number of children who may be sick, from time to time, may be averaged at from twenty to thirty-five. Out of two hundred and twenty, we have never had less than twenty absent on account of illness, and once or twice we had as many as fifty.

Soon after I first took charge of the establishment, I found that there were five or six children in the school who had the measles; the consequence was, that it contaminated the whole school, and about eight children died, one of my own being of that number. This induced me

to be very cautious in future, and I made a point of walking round the school twice every day, in order to inspect the children; and after the adoption of this plan, we did not have the measles in the school.

The hooping-cough is known, of course, by the child hooping; but I consider it the safest plan to send all children home that have any kind of cough; this will cause the mother to come and inquire the reason why the child is sent home; and it can be ascertained from her whether the child has had the hooping-cough or not.

With respect to fever, I generally find the children appear chilly and cold, and not unfrequently they are sick. I do not, however, feel myself competent to describe the early symptoms of this disorder; but the best way to prevent its gaining ground in the school, is to send all the children home who appear the least indisposed.

As to the ophthalmia, I can describe the symptoms of that disease, having had it myself, together with the whole of my family. It generally comes in the left eye first, and causes a sensation as if something was in the eye, which pricks and shoots, and produces great pain: the white of the eye will appear red, or what is usually called bloodshot; this, if not speedily attended to, will cause blindness; I have had several children that have been blind with it for several days. In the morning the patients are not able to uncloze their eyes for some time after they are awake. As soon as I observe these appearances, I immediately send the child home; for I have ascertained, beyond a doubt, that the disease is contagious, and if a child be suffered to remain with it in the school, the infection will speedily spread among the children.

As children are frequently apt to burn or scald themselves, I will here insert a method for adoption in such cases. It is very simple, and yet infallible; at least, I have never known it to fail. It is no other than the application of common writing ink. One of my own children burnt its hand dreadfully, and was cured by immediately washing it all over with that liquid. Several children burnt

their hands against the pipe that was connected with the stove in the school-room, and were cured by the same means. One boy, in particular, took hold of a hot cinder that fell from the fire, and it quite singed his hand; I applied ink to it, and it was cured in a very short time. Let any one, therefore, who may happen to receive a burn, apply ink to it immediately, and he will soon witness the good effects of the application.

### No. III.

#### EXAMPLE OF AN INFANT SCHOOL TRIAL BY JURY, AND ITS RESULT, FROM MR WILDERSPIN'S WORK.

A most important means of discipline appears in what we term "trial by jury," which is composed of all the children in the school. It has been already stated that the playground is the scene for the full development of character, and, consequently, the spot where circumstances occur which demand this peculiar treatment. It should be also particularly observed, that it is next to prayer in solemnity, and should only be adopted on extraordinary occasions. Any levity manifested either by the teacher or the pupils, will be fatal to the effect. But to illustrate it, I will state a fact. In the playground of an Infant School there was an early dwarf cherry-tree, and which, from its situation, had fruit, while other trees had only flowers. It became, therefore, an object of general attraction, and ordinarily called forth a variety of important observations. Now it happened that two children, one five years of age, and the other not quite three, entered the school in the autumn, and on the return of spring, they, having had only a winter's training, were charmed by this object, and in consequence fell into temptation. Accustomed to watch new scholars narrowly, I particularly observed them; when I marked the elder one anxiously, intently, and wishfully gazing on the fruit, and

especially on one amazingly large cherry pendent from a single shoot. While thus absorbed, the younger child was attracted to the spot, and imitated his example. The former then asked if he did not think it a large one, and the reply was, of course, in the affirmative. Having thus addressed the powers of observation, the next appeal was to the taste, by the inquiry, "Is not it a nice one?" The answer to which was "Yes." Then followed the observation, "It is quite soft," when the young one, being thus excited by the touch of the other, touched it also. This act he subsequently repeated, by desire of the elder, who, having charged him to hold it tight, struck his hand, and thus detached the cherry. I now withdrew to some distance, and it was evident that the little one was distressed by what he had done, as he did not eat it, but began to cry faintly, on which the elder took the cherry out of his hand and ate it. This increased the crying, when, on approaching, he ran up to me, saying that the other took my cherry. The little one continuing to cry, the other stated that he saw him take it; to which I replied, "We will try him by and by." As soon, therefore, as the proper time arrived, the bell was rung; prior to which, however, I was apprised of the loss by several children, and when all were seated in the gallery I proceeded as follows: "Now, little children, I want you to use all your faculties, to look at me attentively, and to think of what I am about to say, for I am going to tell you a tale of two little boys. Once on a time they were amusing themselves with a great many other children in a playground, where there were a great many flowers and some fruit-trees. But, before I go on, let me ask you, is it right to take the flowers or fruit which belong to others?" to which the general reply was "No," with the exception of the culprits. I then described their age, stated that one boy was five years old, and the other three; that the former was looking at one of his master's fine cherries, which was growing against the wall, and that the latter approached and looked at it too; on which several

exclaimed, "Please, Sir, your big cherry is gone;" which caused an inspection of each others' countenances. To this I replied, I am sorry for it, but let me finish my tale. "Now, children, while they were both looking at the cherry, the elder one asked the younger if it were not large, to which he replied, Yes; he then inquired, whether it were not nice, when he again answered, Yes; afterwards, he told him, having touched it himself first, to touch it because it was soft, and the little boy unfortunately did so, on which the big one pulled his arm, and the cherry came off in his hand." While this was proceeding the two delinquents sat very demurely, conscious that they were portrayed, though all the rest were ignorant of the fact. I then said, "Which do you think the worst of these boys?" when several answered, "The biggest was the worst." On inquiring "Why?" the reply was, "Because he told the little one to take it;" while others said, "Because he pulled his arm." I added, "I have not told you the whole tale yet, but I am glad to see that you know right from wrong, and presently you will be still better prepared to judge. When the big boy had told the little one to take the cherry, he then robbed him of it, and immediately betrayed him by telling the master. Now, which do you think was the worst?" When a great number of voices vociferated, "The big one." I then inquired, if they thought we had such children in our school? The general reply was, "No," but the scrutiny among themselves was redoubled. To this I rejoined, "I am sorry to say such children are now sitting among you in the gallery." At this crisis the little one burst into tears, on which the children said, "Please, Sir, that's one of them, for his face is so red, and he cries." I answered, "I am sorry it is so," and called the culprit to come down, with, "Come here, my dear, and sit by the side of me, until we examine into it." This was followed by the outcry, "Please, Sir, we have found the other; he hangs his head down, and his face looks white."

This child was then called down in the same mild manner, to sit on the other side of me. I then told them, that they would find, when they became men and women, that in our courts of law witnesses of what was done were called, and as the elder boy had seen the young one take the cherry, it was necessary and desirable to hear what he had to say. On being desired to stand up, I therefore said, "Did you see him take the cherry?" To which he promptly answered "Yes." The next inquiry was, What did he do with it? To this he was silent, on which the little one, not being able to contain himself, called out, "He took it from me and ate it." All eyes were now turned to the big one, and all felt convinced that he was the most guilty, whilst the confidence of the little one increased by the prospect of having justice done him, as he previously feared that, being accused by the elder one, he should be condemned without ceremony.

Finding that the elder one had no more to say, it only remained to hear the defence of the young one, who, sensible of having done what was wrong, said, in broken accents, "He told me to take it,—he hit my hand,—and he ate the cherry." To which it was necessary to give the admonition, That he never ought to do wrong, though required to do so by others; and that such a defence would avail him nothing were he a man. Both the children were now exceedingly distressed, and hence this was the time to appeal to the rest as to the measure of punishment that was due. The general opinion was, that the eldest should be punished, but no one mentioned that the young one should have even a pat on the hand; the next thing was to appeal to the higher faculties of the little culprit, who, seeing that he had thus far got off, required to be softened down in reference to the other, though he had betrayed him, while the best way of operating on the elder was by a display of love on the part of the younger; he was therefore asked if he would forgive the other, and shake hands with him, which he immediately did, to the evident delight and satisfaction of all

the children, while the countenance of the elder showed that he felt himself unworthy of the treatment he received. I then inflicted the sentence which had been pronounced—two pats of the hand, which the girls asked might be soft ones, and sent him to his seat, while I concluded the whole with some appropriate exhortations. It is pleasing to add, that the elder proved one of the most useful monitors I ever had.

Should any persons be disposed to object to such a process, they may be reminded that the Infant System deals with children as rational creatures, and is designed to prepare them for future life. I have seen numerous instances of its beneficial effects; these have induced me to pursue the plan, and in the strongest terms to recommend it to others. In all cases, the matter should be stated to the children simply, calmly, and slowly, and they will seldom, if ever, come to a wrong conclusion.

#### No. IV.

##### INVENTORY OF APPARATUS IN THE EDINBURGH MODEL INFANT SCHOOL.

- 19 Boards of quadrupeds, 2 on each board, no descriptions.
- 3 Boards of quadrupeds, 2 on each board, with descriptions.
- 35 Boards of quadrupeds, 1 on each board, with descriptions.
- 15 Boards of birds, 1 on each, ditto, ditto,
- 24 Boards of Scripture prints, with lessons.
- 46 Boards of many objects used as post lessons.
- 11 Boards of Scripture texts in large letters.
- 9 Boards of geometrical figures, compass, and clock.
- 8 Boards with reading lessons.
- 16 Boards with Mr Milne's alphabet and spelling sheet.
- 2 Boards, owls.

- 100 slates, 1 tin box for slate pencils.
- 9 Lesson posts, and 10 small stools.
- 12 Chairs.
- 2 Ladders.
- 3 Large maps, the World, Europe, Scotland.
- 1 Political chart.
- Ball frame, or arithmeticon.
- Large table in class-room.
- A desk.
- Brass figures.
- Brass gonigraph.
- A number of minerals.
- Shovel and rake for garden.

*Belonging to the Teacher, as furnished by him.*

- 12 Plates on farming, on pasteboards.
- 6 Boards, smith's shop, farm-yard, the senses, harvest home, John Gilpin, stages of life.
- 4 Boards, the kings of England, the divisions of the globe with the pen.
- The division of the globe and the rivers, a plate.
- 5 Trees, on five pasteboards.
- 1 Long board, containing eight trees.

*Lessons on large Pasteboard Sheet.*

- 1. The capitals of Europe.
- 2. The kings of England.
- 3. The fractions of a pound.
- 4. The fractions of a foot, and numeration table.
- 5. The fractions of a shilling.
- 6. The half-crowns.
- 7. The phases of the moon, and solar system.
- 8. The circles of the globe.
- 9. The zones of the globe.
- 10. The days in the months of the year,
- 11. The comparative size of the planets.



12. Four squares of coloured figures to show bees' cells.
13. 20s. are one pound.
14. 20d. are 1s. 8d., and capitals of Europe.
15. Tetragons and polygons, (a small sheet.)
16. 8 varieties of triangles.
17. Larger sheet on the polygons.
18. Portions of land and water, and hemispheres.
19. Roman notation table.
20. Organs of the senses, and denomination of land.
21. Rivers of Scotland.
22. Towns and rivers of Scotland.
23. The compass, map of Scotland.
24. The earth in her orbit.
25. Positions of geometrical lines.
26. The solar system, (coloured lithograph.)

*The Card Box.*

Set for capitals, kingdoms, rivers, latitude, &c. and kings of Europe.

Set on the sciences.

Set for nouns, implying number.

Set for classification of objects.

Set for opposite qualities, arranged under particular senses.

Set for mental calculation.

Set for mental reduction of pence to shillings.

Set for Roman notation.

Set for the parables of Jesus.

Set for the miracles of Jesus.

Set on the mountains and rivers mentioned in the Bible.

Set for reading, pounds, shillings, and pence, £.

Set for reading, shillings, and pence,  $\frac{1}{2}$ , (thus.)

Set for exercise on fractions.

Set for exercise on the plural of pronouns.

Set of small figures on boards, for exercise on numeration.

- 7 Sets of large figures on wood, used on numeration stand.  
 Set for reading arithmetical table marks.  
 Notation stand with shifting cloths.  
 Card stand.  
 Gonigraph made of steel.  
 Real mariner's compass, sand-glass.  
 Level, square, compasses, hammers.

## No. V.

SPECIMENS OF HYMNS, VERSES, AND RHYMES, BY  
DIFFERENT AUTHORS.*Sacred Hymns.*

## THE LORD'S PRAYER.

Father of all ! we bow to thee,  
 Who dwell'st in heaven adored,  
 But present still, through all thy works,  
 The universal Lord.

For ever hallow'd be thy name  
 By all beneath the skies ;  
 And may thy kingdom still advance  
 Till grace to glory rise.

A grateful homage may we yield,  
 With hearts resign'd to thee ;  
 And, as in heaven thy will is done,  
 On earth so let it be.

From day to day, O may we own  
 The hand that feeds us still  
 Give us our bread, and teach to rest  
 Contented in thy will.

Our sins O teach us to confess,  
 And may they be forgiven ,

To others let us mercy show,  
And beg the same from heaven.  
Still let thy grace our life direct,  
From evil guard our way ;  
And in temptation's fatal path  
Permit us not to stray.  
The kingdom, pow'r, and glory—all  
Alone belong to thee ;  
Thine from eternity they were,  
And thine shall ever be.

---

## MY FATHER.

Great God ! and wilt thou condescend  
To be my Father and my Friend ?  
I, a poor child, and thou so high,  
The Lord of earth, and air, and sky !  
Art thou my Father ?—Canst thou bear  
To hear my poor imperfect prayer ?  
Or wilt thou listen to the praise  
That such a little one can raise ?  
Art thou my Father ?—Let me be  
A meek obedient child to thee ;  
And try in word, and deed, and thought,  
To serve and please thee as I ought.  
Art thou my Father ?—I'll depend  
Upon the care of such a friend ;  
And only wish to do, and be,  
Whatever seemeth good to thee.  
Art thou my Father ?—Then, at last,  
When all my days on earth are past,  
Send down and take me in thy love,  
To be thy better child above.

## THE GOOD PETITION.

Father, whate'er of earthly bliss  
Thy sovereign will denies,  
Accepted at thy throne of grace,  
Let this petition rise :—

Give me a calm, a thankful heart,  
From every murmur free ;  
The blessings of thy grace impart,  
And make me live to thee.

O let the hope that I am thine  
My life and death attend  
Direct my steps by light divine,  
And bless my journey's end.

---

## LOVE TO EACH OTHER.

Jesus, Lord, we look to thee,  
Let us in thy name agree ;  
Each to each still more endear,  
Bless us infants meeting here.  
Make us one in heart and mind,  
Courteous, pitiful, and kind ;  
Lowly, meek, in thought and word,  
Altogether like our Lord.

Let us each for other care,  
Joy or grief together share ;  
To our friends a pattern give,  
How instructed children live.

---

## THE DIVINE ATTRIBUTES.

I sing th' Almighty power of God,  
That made the mountains rise ;  
That spread the flowing seas abroad,  
And built the lofty skies.

I sing the wisdom that ordain'd  
The sun to rule the day ;  
The moon shines full at his command,  
And all the stars obey.

I sing the goodness of the Lord,  
That fill'd the earth with food ;  
He form'd the creatures with his word,  
And then pronounced them good.

Lord, how thy wonders are display'd,  
Where'er I turn mine eye ;  
If I survey the ground I tread,  
Or gaze upon the sky !

There's not a plant or flower below,  
But makes thy glories known ;  
And clouds arise, and tempests blow,  
At thy command alone.

---

## GRATITUDE.

Lord, I would own thy tender care,  
And all thy love to me ;  
The food I eat, the clothes I wear,  
Are all bestow'd by thee.

'Tis thou preservest me from death  
And danger every hour ;  
I cannot draw another breath,  
Unless thou givest power.

My health, and friends, and parents dear,  
Are by thy bounty given ;  
I have not any blessing here,  
But what is sent by Heaven.

Such goodness, Lord, and constant care,  
A child can ne'er repay ;  
But may it be my daily prayer,  
To love thee and obey.

## CREATION.

Who made the sun that gives his light  
To all the world abroad ?  
Who made the moon and stars so bright ?  
'Twas the Creator—God.

Who made this wondrous globe, the earth,  
Where we have our abode ?  
And gave so many creatures birth ?  
'Twas the Creator—God.

Who raised the gloomy clouds so high,  
Which o'er our heads explode ?  
Who cloth'd in blue the vaulted sky ?  
'Twas the Creator—God.

Who spoke the word at which the streams  
Into an ocean flow'd ?  
Who gave the life with which it teems ?  
'Twas the Creator—God.

Who form'd the brutes of varied kind,  
By which the ground is trod ?  
And birds that fly before the wind ?  
'Twas the Creator—God.

Who gaily dress'd the pretty flowers,  
And verdant made the sod ?  
Who raised the trees like stately towers ?  
'Twas the Creator—God.

---

## MONDAY MORNING.

Spared to begin another week,  
Humbly thy blessing, Lord, we seek,  
Guide in the lessons of the day,  
Guard us from danger in our play.  
Give the retentive mem'ry, Lord,  
Let every mind with truth be stored ;

More of the Scriptures may we know,  
Wiser and better daily grow.

Thanks to the Lord, we here enjoy  
Means that our infant powers employ ;  
Much we may learn of useful truth,  
Ev'n in the earliest stage of youth.

---

## MORNING THANKS.

My Father, I thank thee for sleep,  
For quiet and peaceable rest ;  
I thank thee for stooping to keep  
An infant from being distress'd :  
O how can a poor little creature repay  
Thy kindness, continued by night and by day !

My voice would be lisping thy praise,  
My heart would repay thee with love ;  
O teach me to walk in thy ways,  
And fit me to see thee above !  
For Jesus said, Let little children come nigh ;  
Nor will he despise such an infant as I.

As long as thou seest it right,  
That here on the earth I should stay,  
I pray thee to guard me by night,  
And help me to serve thee by day ;  
That when all the days of my life shall have pass'd,  
In heav'n I may worship thee better at last.

---

## HOLY SAVIOUR.

Holy Saviour ! now before thee,  
We an infant race appear,  
Teach us how we should adore thee,  
Fill our hearts with godly fear :  
Friend of Infants,  
Bless our exercises here.

Have us in thy holy keeping,  
Out and in our goings guide ;  
Save from every cause of weeping,  
Let no evil e'er betide :  
Friend of Infants,  
Always in thy bosom hide.

Wiser let us all be growing  
By the lessons we receive ;  
Let our words and deeds be showing  
That to truth and right we cleave :  
Friend of Infants,  
Teach us how we ought to live..

---

## THE INFANT'S FRIEND.

To thee, Guide of our infant days,  
Our evening prayers ascend ;  
To thee we sing our hymns of praise,  
O thou, the Infant's Friend.  
From thee our daily mercies flow,  
On thee our lives depend ;  
To thee how great the thanks we owe,  
O thou, the Infant's Friend.  
To thee, before we now retire,  
Our teachers we commend ;  
And blessings for ourselves desire,  
O thou, the Infant's Friend.  
With thee all our remaining days,  
O teach us, Lord, to spend ;  
And then to heaven our spirits raise,  
O thou, the Infant's Friend.

*N. B.—The eleven foregoing hymns are selected from  
the collection in Milne's Infant School Rhymes.*



## AN EVENING HYMN.

Lord we have pass'd another day,  
And come to thank thee for thy care :  
Forgive our faults in work or play,  
And listen to our evening pray'r.  
Look down in pity, and forgive  
Whate'er we've said or done amiss,  
And help us, every day we live,  
To serve thee better than in this.  
Now condescend, Almighty King !  
To bless this little Infant School,  
And kindly listen while we sing  
Our very pleasant evening rule.  
Brothers and sisters, hand in hand,  
And let our lips together move ;  
Then smile upon this little band,  
And join our hearts in mutual love.

---

## OUR SAVIOUR'S GOLDEN RULE.

Be you to others kind and true,  
As you'd have others be to you ;  
And neither do nor say to men,  
Whate'er you would not take again.

---

## DUTY TO GOD AND OUR NEIGHBOUR.

Love God with all your soul and strength,  
With all your heart and mind ;  
And love your neighbour as yourself ;  
Be faithful, just, and kind.  
Deal with another as you'd have  
Another deal with you :

What you're unwilling to receive  
Be sure you never do.

*N. B.—The foregoing three hymns are taken from  
“Hints for the Formation of Infant Schools.”*

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*Moral Hymns.*

THE CONSCIENCE.

*Tune—“Away with Melancholy.”*

When a foolish thought within  
Tries to take us in a snare,  
Conscience tells us, It is sin,  
And entreats us to beware.  
If in something we transgress,  
And are tempted to deny,  
Conscience says, Your faults confess,  
Do not dare to tell a lie.  
When our angry passions rise,  
Tempting to revenge an ill,  
Now subdue it, conscience cries;  
Do command your temper still.  
Thus, without our will or choice,  
This good monitor within,  
With a secret gentle voice,  
Warns us to beware of sin.  
But if we should disregard,  
When this friendly voice would call,  
Conscience soon will grow so hard,  
That it will not speak at all.

---

SCHOOL A PLEASURE.

*Tune—“Life let us cherish.”*

School is a pleasure  
Now unto the Infant mind,

Here we a treasure  
Of heavenly wisdom find.

We learn, the Holy Scriptures say,  
That we should honour and obey,  
And do our utmost to repay  
Our father and our mother.

We learn, how right it is we should  
At home be always very good,  
And ne'er be quarrelsome or rude  
With sister or with brother.

We learn, our friends are pleased to see  
So many infants all agree,  
And striving only who shall be  
The kindest to each other.

We learn in peace with all to live,  
And even our enemies forgive,  
And none to flatter or deceive,  
By any means whatever.

---

HOME AND SCHOOL.

*Tune—"Sweet Home."*

While many from place unto place have to roam,  
We ought to be thankful that we have a home ;  
A home where in safety with parents we stay,  
And have many comforts by night and by day.

Home, sweet home,  
There's no place like home.

Next to home we are pleased in our sweet Infant School  
'Tis here we're instructed in each pretty rule,  
And here in their turn we have lessons and play,  
And cheerfully spend with each other the day.

School, sweet school,  
We like well our school.

## PARENTAL AFFECTION.

*Tune—"Lonesdale."*

The love of our parents, we know,  
We never can fully repay ;  
Then let us, as older we grow,  
More cheerfully still them obey.  
They loved us before we could tell  
Who for us so tenderly cared ;  
They grieved when they saw us unwell,  
And fear'd lest we should not be spared.  
They watch'd all our footsteps to guide,  
And save us from every distress ;  
They labour'd for us to provide,  
And often did fondly caress.  
How wicked it is then we should  
At any time give them a pain !  
Each day let us try to be good,  
And never to grieve them again.

---

## OBEDIENCE TO PARENTS.

*Tune—"There's nae Luck about the House."*

Come let us make it our delight  
To do the things we ought,  
'Tis good to know, and do the right,  
And mind what we are taught.  
Wherever we are told to go,  
At once we should obey,  
Nor ever think it hard although  
We leave a pretty play.  
When we are bid we ought to bring  
Whatever we have got,  
And never handle any thing  
Which parents tell us not.

When they permit us, we may tell  
About our little toys ;  
But if they're busy or unwell,  
We must not make a noise.

---

## THE GOLDEN RULE.

*Tune—" Peterborough."*

To do to others as I would  
That they should do to me,  
Will make me honest, kind, and good,  
As every child should be.  
I never need behave amiss,  
Nor feel uncertain long,  
As I may always know by this,  
If things are right or wrong.  
I know I should not steal, or use  
The smallest thing I see,  
Which I should never like to lose,  
If it belong'd to me.  
And this plain rule forbids me quite  
To strike an angry blow,  
For I should never think it right  
If others served me so.

---

## SCHOOLMATE'S DEATH.

*Tune—" St Neot's."*

Unsparring death hath borne away  
A fellow from our side,  
Just in the morning of his day,  
And young as we he died.  
Not long ago he fill'd a place,  
Along with us to learn,  
But ended is his mortal race,  
No more can he return.

Perhaps our time may be as short,  
 Our days may fly as fast ;  
 Indeed—it is a solemn thought—  
 This day may be our last.  
 Who next beneath the stroke may fall,  
 No creature can declare ;  
 One must be first, but let us all  
 For that event prepare.

---

## TENDER-HEARTEDNESS.

*Tune—" Plymouth."*

Sweet it is to see a child,  
 Tender, merciful, and mild ;  
 Never yielding to perform  
 Cruel acts upon a worm :  
 Grieving that the world should be  
 Thus a scene of misery ;  
 Scene in which the creatures groan,  
 For transgressions not their own.  
 If the creature must be slain,  
 Thankless sinners to sustain,  
 Such a child will softly cry,  
 Treat them gently when they die ;  
 Spare them when they yield their breath ;  
 Double not the pains of death ;  
 Strike them not at such a time,  
 Then it is indeed a crime.

---

## AGAINST CRUELTY.

*Tune—" There's nae Luck about the House."*

Nor bird, nor beast should we molest,  
 Or give them needless pain ;  
 Although they cannot, when distress'd,  
 To any one complain.

Although committed to our care,  
And given for us to use ;  
'Twould show us cruel should we dare  
Dumb animals abuse.  
Our safety, cleanliness, or food,  
May oft their life require,  
But where's the tender heart that would  
For sport their pain desire ?  
Ne'er let us for amusement then  
A living thing torment,  
Nor join with any boys or men,  
Who cruel deeds invent.

---

## THE FLOWERS.

*Tune—" Begone dull Care."*

The children of an Infant School,  
Whene'er allow'd to play,  
Should neither fruit nor blossoms pull,  
Nor on the border stray.  
For should we pluck the flowers, we know,  
Or tread them on their beds,  
Then we could never make them grow,  
And spread their pretty heads.  
But we may look upon them all,  
Their names and colours tell ;  
And may around the garden wall  
Their pleasing fragrance smell.  
Without the sun, nor hill nor plain  
Could yield us fruit or flowers ;  
Nor could they flourish, if the rain  
Fell not in gentle showers.

## LOVE OF PEACE.

Yes, we should hate the noisy sound  
Of drums parading round and round,  
Which to the thoughtless pleasure yields,  
And lures from arts or peaceful fields,  
To sell their liberty for charms  
Of tawdry lace and glittering arms ;  
And, when Ambition's voice commands,  
To march, and fight, and fall in foreign lands,  
Yes, we should hate the warlike sound,  
Parading round, and round, and round,  
Which talks to us of ravaged plains,  
And burning towns, and ruin'd swains,  
And mangled limbs, and dying groans,  
And widows' tears, and orphans' moans,  
And all that misery's hand bestows,  
To fill the catalogue of human woes.

---

## INFANT GRATITUDE.

*Tune—" King's Anthem."*

Thanks unto you we owe,  
Who such an interest show  
In Infant Schools :  
O, that your wishes may  
Be gratified this day,  
In seeing us obey  
Our moral rules.

Thanks is a poor return,  
For all that we may learn  
In Infant Schools :  
But this is all your prayer,  
That here we may prepare,  
Our future lives to square  
By Scripture rules.



## WHAT CAN YOU CHILDREN DO ?

*Tune—"O how Pretty!"*

The letters we can rightly tell,  
The consonants distinguish well ;  
And many little words can spell,

According to Orthography.

The name and nature of a line,  
And angles too we can define,  
And how together they combine,  
According to Geometry.

The shape of our own world we know,  
Its great divisions we can show ;  
And o'er the map of Europe go,  
According to Geography.

We know the cause of day and night,  
We know the source of heat and light ;  
The planets we can name aright,  
According to Astronomy.

We read the figures millions high,  
And fractions very often try ;  
And add, subtract, and multiply,  
As taught by Arithmetic.  
The parts of speech we oft recite,  
In naming opposites delight,  
And words can classify aright,  
As taught by English Grammar.

We know of insects, fish, and worms,  
Of birds that shun our winter storms ;  
Of many beast and reptile forms,  
According to Zoology.

We know of fruit and timber trees,  
Of flowers whose pretty colours please :  
And even plants beyond the seas,  
According unto Botany.

The Kings of England we can name,  
 And tell a little of their fame ;  
 And how the British throne they claim,  
     According unto History.  
 We know about the thunder cloud,  
 When sultry gloom the skies enshroud,  
 Which bursts with flash, and rolling loud,  
     As shown by Electricity.  
 We know the Saviour's new command,  
 The golden rule we understand ;  
 For these are to our Infant band  
     The standard of Morality.

*N. B.—The foregoing thirteen hymns are selected from  
 Milne's Infant School Rhymes.*

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AMUSING AND INSTRUCTIVE RHYMES.

*Geometrical Rhyme.*

The following is sung :—

Horizontal, perpendicular,  
 Horizontal, perpendicular,  
     Parallel, parallel,  
     Parallel lines,  
 Diverging, converging, diverging lines,  
 Diverging, converging, diverging lines.  
     Spreading wider, or expansion,  
     Drawing nearer, or contraction.  
     Falling, rising,  
     Slanting, crossing,  
 Convex, concave, curved lines,  
 Convex, concave, curved lines.  
     Here's a wave line, there's an angle,  
     Here's a wave line, there's an angle ;  
     An ellipsis,  
     Or an oval,

A semicircle halfway round,  
Then a circle wheeling round.

## GRAMMAR.

English Grammar doth us teach,  
That it hath nine parts of speech ;—  
Article, adjective, and noun,  
Verb, conjunction, and pronoun,  
With preposition, and adverb,  
And interjection, as I've heard.  
The letters are just twenty-six,  
These form all words when rightly mixed.  
The vowels are a, e, o, i,  
With u, and sometimes w and y.  
Without the little vowels' aid,  
No word or syllable is made ;  
But consonants the rest we call,  
And so of these we've mentioned all.  
Three little words we often see,  
Are articles,—*a*, *an*, and *the*.  
A noun's the name of any thing—  
As *school*, or *garden*, *hoop*, or *swing*.  
Adjectives tell the kind of noun—  
As *great*, *small*, *pretty*, *white*, or *brown*.  
Instead of nouns the pronouns stand—  
John's head, *his* face, *my* arm, *your* hand.  
Verbs tell of something being done—  
To *read*, *write*, *count*, *sing*, *jump*, or *run*.  
How things are done the adverbs tell—  
As *slowly*, *quickly*, *ill* or *well*.  
Conjunctions join the nouns together—  
As men *and* children, wind *or* weather.  
A preposition stands before  
A noun, as *in* or *through* a door.  
The interjection shows surprise—  
As *oh* ! how pretty—*ah* ! how wise.  
The whole are called nine parts of speech,  
Which reading, writing, speaking teach.

*The foregoing eight rhymes are selected from Wilder-  
spin's Infant System.*

---

## THE RAIN.

*Tune—"Robin Hood."*

The falling rain will us detain  
From getting out to play;  
But why complain, by this we gain  
A lesson more to-day.

The drops are small, and quickly fall,  
To fertilize the ground;  
Then round the wall, so fresh and tall,  
The plants and flowers are found.

The clouds that fly along the sky  
Collect the watery store;  
And to supply the earth when dry,  
Thus out their torrents pour.

Wise men agree, that from the sea  
The vapours chiefly rise;  
When once set free, unseen they flee,  
And gather in the skies.

When vapours freeze by slow degrees,  
They fall as fleecy snow;  
But hail is rain congeal'd again  
While dropping down below.

*If sung to the tune of Robin Hood, this is added after every verse.*

Then follow, follow me, my little girls and boys,  
And we'll the pastime see;  
For instead of the swing, all the children will sing,  
And the time pass merrily.

## THE THUNDER.

The little children wonder  
To hear the rolling thunder,  
Now making such a noise;  
It is at no great distance,  
And none can make resistance  
Wherever it destroys.

But we should not be frighten'd,  
Who are so much enlighten'd  
Concerning nature's laws;  
Dark clouds together dashing  
Discharge their fire in flashing,  
And are the thunder's cause.

---

## THE SUN.

*Tune—"Auld Langsyne."*

Behold the sun that shines so bright,  
How dazzling is his ray;  
He shines to give us heat and light,  
And where he shines 'tis day.

Far, far away he seems so small,  
Though he is large indeed;  
Round him our earth and planets all  
In rapid course proceed.

The sil'ry moon, and planets too,  
To him their lustre owe;  
His beams, the rain-drops passing through,  
Paint in the clouds the bow.

He in the morning seems to rise,  
And brighter grow till noon;  
And then, far westward in the skies,  
Appears a-setting soon.

But here the truth has been found out ;  
 Astronomy now shows,  
 From west to east the earth about  
 Its axis quickly goes.

---

## THE RAINBOW.

When the sun with cheerful beams  
 Smiles upon the low'ring sky,  
 Soon its aspect soften'd seems,  
 And a rainbow meets the eye.  
 While the sky remains serene,  
 This bright arch is never seen.

---

## THE WIND.

*Tune—"Ally Croker."*

When wind at sea begins to blow,  
 The seaman spreads the canvass sail,  
 And as it moves, or quick or slow,  
 He calls it breeze, or storm, or gale;  
 But if it blows with such power,  
 That all resistance is in vain,  
 Moving at eighty miles an hour,  
 He says 'tis then a hurricane.

CHORUS—O how curious, wonderfully curious !  
 The laws of nature are indeed  
 Most wonderfully curious !

The wind, in this the temperate Zone,  
 Is very changeable indeed,  
 But in the torrid it is known  
 One way for six months to proceed.  
 Though much the wind in ruin lays,  
 Its usefulness is understood;  
 That wind, just as the proverb says,  
 Is bad that blows to no one good.

O how curious, &c.

## PENCE.

*Tune—"Here's a Health."*

Twenty pence are one and eightpence,  
 Thirty pence are two and sixpence,  
 Forty pence are three and fourpence,  
 Fifty pence are four and twopence,  
 ·\$. Sixty pence will make five shillings. ·\$.  
 Seventy pence are five and tenpence,  
 Eighty pence are six and eightpence,  
 Ninety pence are seven and sixpence,  
 A hundred pence are eight and fourpence,  
 ·\$. A hundred and eight pence make nine shillings. ·\$.

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## SHILLINGS.

*Chant.*

Twenty shillings are one pound,  
 Twenty-five shillings are one pound five,  
 Thirty shillings are one pound ten,  
 Thirty-five shillings are one pound fifteen,  
 Forty shillings are two pounds,  
 Forty-five shillings are two pound five,  
 Fifty shillings are two pound ten,  
 Fifty-five shillings are two pound fifteen,  
 Sixty shillings are three pounds,  
 Sixty-five shillings are three pound five,  
 Seventy shillings are three pound ten,  
 Seventy-five shillings are three pound fifteen,  
 Eighty shillings are four pounds,  
 Eighty-five shillings are four pound five,  
 Ninety shillings are four pound ten,  
 Ninety-five shillings are four pound fifteen,  
 A hundred shillings are five pounds.

## AVOIRDUPOISE WEIGHT.

*Tune—"Hearts of Oak."*

In avoirdupoise weight it will always be found,  
 Sixteen drams are an ounce, sixteen ounces a pound;  
 And of pounds must be taken four times twenty-eight,  
 To make what is called a neat hundredweight;  
 And twenty such hundreds will just make a ton;  
 So, buying or selling, let justice be done.

## CHORUS.

With weights that are just, and scales that are true,  
 And balances steady, always be ready  
 To weigh as you would they should weigh unto you.

## APOTHECARIES' WEIGHT.

*Tune—"Ye Banks and Braes."*

A scruple equals twenty grains,  
 Three scruples neat a drachm contains,  
 Eight drachms will in an ounce be found,  
 Twelve ounces only make a pound.

This weight apothecaries choose  
 When mixing medicine to use;  
 But when they buy, or when they sell,  
 Avoirdupoise then suits as well.

## LONG MEASURE.

*Tune—"Away with Melancholy."*

If three barley-corns you lay  
 End to end, an inch they make;  
 Twelve such inches, then we say,  
 For a foot our measures take.

To a yard we give three feet,  
 To a pole five yards and half;  
 Forty poles a furlong mete,  
 Whether with a line or staff.



In a mile eight furlongs be,  
For a league three miles have stood ;  
But the length of a degree  
Varies with the latitude.

---

## TIME TABLE.

*Tune—"Ye Banks and Braes."*

Just sixty seconds make a minute,  
To hours are sixty minutes given ;  
A day has twenty-four hours in it,  
In every week the days are seven.

The months have often thirty days,  
More often still have thirty-one ;  
Twelve months complete the year always,  
Each hundred years a cent'ry's run.

Just fifty-two weeks and a day  
Will also to a year amount ;  
And this, when given in days, we say  
Three hundred sixty-five will count.

But to the last of each four years  
The term Bissextile we affix ;  
For then another day appears,  
And makes three hundred sixty-six.

---

## CLOTH MEASURE.

Thus measure cloth exposed to sale—  
Two inches and a fourth a nail ;  
Four nails a quarter then regard,  
And take four quarters for a yard.

## FRACTIONS OF A SHILLING.

One penny the twelfth of a shilling,  
Three halfpence the eighth of a shilling,  
Twopence the sixth of a shilling,  
Threepence the fourth of a shilling,  
Fourpence the third of a shilling,  
Sixpence the half of a shilling.

---

## FRACTIONS OF A POUND.

One and eightpence the twelfth of a pound,  
Two shillings the tenth of a pound,  
Two and sixpence the eighth of a pound,  
Three and fourpence the sixth of a pound,  
Four shillings the fifth of a pound,  
Five shillings the fourth of a pound,  
Six and eightpence the third of a pound,  
Ten shillings the half of a pound.

---

## FRACTIONS OF A FOOT.

One inch the twelfth of a foot,  
An inch and half the eighth of a foot,  
Two inches the sixth of a foot,  
Three inches the fourth of a foot,  
Four inches the third of a foot,  
Six inches the half of a foot.

---

## FRACTIONS OF A YARD.

Three inches the twelfth of a yard,  
Four inches the ninth of a yard,  
Four and half inches the eighth of a yard,  
Six inches the sixth of a yard,  
Nine inches the fourth of a yard,  
Twelve inches the third of a yard,  
Eighteen inches the half of a yard.

## NUMBER.

A brace, a couple, or a pair,  
Are other words expressing two;  
But for a dozen, we declare,  
That twelve, and only twelve will do;  
Just twenty for a score we take;  
A gross, twelve dozen always make.

*The above five are repeated with a kind of chant.*

## THE ARTICLES.

Three little words we hear and see  
In frequent use—a, an, and the:  
These words, so useful, though so small,  
Are those which articles we call.

The first two, *a* and *an*, we use  
When speaking of one thing alone;  
For instance, we might wish to say,  
A boy, a dog, an ass, a bone.

But *the* we use to one or more,  
Whene'er to speak it is our wish  
Of something understood before,  
As thus—the birds, the ox, the fish.

## GEOMETRICAL FIGURES.

*Chant.*

Triangle, triangle, three-sided figure,  
Tetragon, tetragon, four-sided figure,  
Pentagon, pentagon, five-sided figure,  
Hexagon, hexagon, six-sided figure,  
Heptagon, heptagon, seven-sided figure  
Octagon, octagon, eight-sided figure,  
Nonagon, nonagon, nine-sided figure  
Decagon, decagon, ten-sided figure.

## GEOMETRICAL EXPLANATIONS.

These are correctly named converging lines  
 As nearer to the other each inclines ;  
 And those diverging, which, as they proceed  
 The farther from each other, still recede ;  
 But parallels, though we should them extend,  
 In vain would try to meet at either end.

Three kinds of angles only are in use,  
 Thus called, the acute, the right, th' obtuse :  
 The right must ever be ninety degrees,  
 Th' acute as many fewer as you please ;  
 Than ninety the obtuse has always more,  
 But never can amount unto nine score.

## ON THE NUMBER OF ANIMALS' FEET.

*Chant.*

Nulliped, nulliped, an animal with no feet,  
 Biped, biped, ..... two feet,  
 Quadruped, quadruped, ..... four feet,  
 Sexiped, sexiped, ..... six feet,  
 Octiped, octiped, ..... eight feet,  
 Multiped, multiped, ..... many feet,  
 Centiped, centiped, ..... a hundred feet.

## THE CAPITALS OF EUROPE.

*Tune—"Wha'll be King but Charlie."*

Edinburgh's the capital,  
 The capital of Scotland ;  
 It lies at the foot of Arthur's Seat,  
 Protected by the Castle.

London is the capital,  
 The capital of England ;  
 It lies on the banks of Royal Thames,  
 The largest river in Britain.

Paris is the capital  
Of France, our country's ally ;  
It lies upon the river Seine,  
And built on rocks of gypsum.

Brussels is the capital,  
The capital of Belgium ;  
It lies upon the banks of the Senne,  
Beside an extensive forest.

Amsterdam's the capital,  
The capital of Holland ;  
It lies on the coast of the Zuyder Zee,  
And built on piles of timber.

Hanover's the capital  
Of Hanover, the kingdom  
From whence the house of Brunswick came,  
That sways the British sceptre.

Berlin is the capital,  
The capital of Prussia ;  
It lies on the banks of tardy Sprey,  
And is a fortified city.

Copenhagen's the capital,  
The capital of Denmark ;  
It lies on a level track of ground,  
On the eastern coast of Zealand.

Christiana's the capital,  
The capital of Norway ;  
It lies on Christiana bay,  
And fifty miles up the interior.

Stockholm is the capital,  
The capital of Sweden ;  
'Tis built upon three rocky isles,  
Where Mæler joins the Baltic.

Petersburgh's the capital,  
The capital of Russia ;  
It lies on the banks where Neva flows  
Into the gulf of Finland.

Warsaw is the capital,  
The capital of Poland ;  
It lies beside the Vistula,  
And now is ruled by Russia.

Dresden is the capital,  
Or chief town of the Saxons ;  
It lies beside the river Elbe,  
And has a grand Museum.

Prague is the capital,  
Or chief town of Bohemia ;  
It lies on the banks of swift Moldau,  
That joins the Elbe above Melnik.

Stutgard is the capital,  
The capital of Wirtemberg ;  
Its site is on the Nisselbach,  
Two miles above the Neckar.

Berne is the capital,  
The capital of Switzerland ;  
Whose two-and-twenty Cantons form  
A federal republic.

Munich is the capital,  
Or chief town of Bavaria ;  
Though old it is a well built town,  
Upon the banks of the Iser.

Vienna is the capital,  
The capital of Austria ;  
It lies upon a fertile plain,  
And south-west of the Danube.

Constantinople's the capital  
Of European Turkey ;  
Its site is where the Bosphorus  
And Black Sea form a junction.

Naples is the capital,  
The capital of Naples ;  
It lies seven miles from Vesuvius,  
A noted burning mountain.

Rome is the capital,  
The capital of the Popedom ;  
'Tis built upon seven little hills  
Upon the banks of the Tiber.

Florence is the capital  
Of Tuscany, a dutchy ;  
On Arno's fertile banks it shows  
Its splendid architecture.

Turin is the metropolis  
Of the Sardinian kingdom ;  
It lies on the banks of noble Po,  
Which issues from Mount Viso.

Madrid's the capital of Spain,  
The highest one in Europe ;  
It lies between two chains of hills,  
Where flows the Manzanares.

Lisbon is the capital,  
The capital of Portugal ;  
It lies near where the Tagus flows  
Into the Atlantic ocean.

Dublin is the capital,  
The capital of Ireland ;  
It lies upon the Liffey's banks,  
A slow and winding river.

---

THE TIGER.

*Tune—"Ye Banks and Braes."*

The tiger, fearless, tries his might  
With ev'ry beast that comes in sight ;  
And kills ev'n when he does not need  
Upon his victim's flesh to feed.

His head is large, his body long,  
His limbs are short, his claws are strong ;  
His yellow skin has blackish streaks,  
And cruelty his eye bespeaks.

The sultry regions of the East  
Are much molested by this beast ;  
The jungles screen his bloody den,  
And save him from the hunting-men.  
On horse or buffalo he'll seize,  
And kill and drag it off with ease ;  
For there to feast he will not stay,  
But carries to his den his prey.

---

## THE SHEEP.

The silly, feeble, timid sheep,  
The slightest noise will scare ;  
And cannot out of danger keep,  
Or of their foes beware.  
Nor will they proper shelter seek,  
Though storms so ill they bear,  
And therefore, waking or asleep,  
Require a shepherd's care.  
Sheep go together in a band,  
On mountain or on mead ;  
And are unto our native land  
A precious gift indeed.  
For multitudes, we understand,  
On lamb and mutton feed ;  
And of their wool is nicely plann'd  
The raiment that we need.

---

## THE COCKATOO.

There is a bird of plumage rare,  
In gilded cage exposed to view,  
Procured with cost, preserved with care,  
We mean the gaudy cockatoo.  
He is a foreign bird of fame,  
And talks as parrots often do ;  
For if we ask him what's his name,  
He'll say 'tis pretty cockatoo.



Yet in these words, repeated o'er,  
Does all this scholar's wisdom lie ;  
For to a thousand questions more  
He only gives the same reply.  
If asked who made his gilded cage,  
Or who his master's portrait drew,  
Who was in Greece the wisest sage ?  
He'll say 'Twas pretty cockatoo.  
Thus may children sent to school,  
Perform the same unmeaning rounds ;  
Learn all by oft-repeated rule,  
Yet see no meaning in the sounds.  
But we should never thus by rote  
Run day by day our lessons through,  
And never give the sense a thought,  
Like prating pretty cockatoo.  
A bird may come to sound its name,  
A bird may almost learn to spell,  
But boys and girls may surely aim,  
At something more than birds can tell.  
The wreath which grows on wisdom's bough  
Is free to all, though cropp'd by few ;  
And we may pluck a leaf even now,  
And shame the senseless cockatoo.  
Cockatoo, cockatoo, pretty pretty cockatoo—  
His answer is to all we say,  
Just—pretty, pretty cockatoo.

*This chorus is used when the rhyme is sung to 'Ally Croker.'*

---

THE DAISY,

There is a flower, a little flower,  
With silver crest and golden eye,  
That welcomes every changing hour,  
And weathers every sky.

On waste, on woodland, rock, and plain,  
Its humble buds unheeded rise ;  
The rose has but a summer's reign—  
The daisy never dies.

---

## THE TREES.

In India there are spicy trees,  
Whose fruit and gorgeous bloom  
Give to the faint and languid breeze  
Its rich and rare perfume.

In Portugal and fertile Spain  
Abound the orange groves ;  
In France, the juicy vines they train  
Around the trim alcoves.

But odoriferous plants like these  
Our climate does not suit ;  
Yet we have many useful trees,  
For timber or for fruit.

The deadly yew-tree often lends  
Its greenness to the grave ;  
The weeping willow fondly bends  
Its branches o'er the wave.

The birch displays its slender tress,  
Yet beautifully fair ;  
The poplar waves its silver dress  
With slightest breath of air.

The elm lifts up a lofty head,  
And first in leaf is seen ;  
The beech extends an ample shade  
Of leaves of glossy green.

The stately oak, the forest's pride,  
A stem enormous shows ;  
And, spreading out on every side,  
Gigantic branches throws.

Its leaf is late in spring, yet shares  
The zephyr's gentle sigh ;  
And late and long in autumn wears  
A deeper, richer dye.

*The foregoing nineteen rhymes are selected from Milne's  
Infant School Rhymes.*

---

#### TIME, OR CHRONOLOGY.

Sixty seconds make a minute,  
Time enough to tie my shoe ;  
Sixty minutes make an hour,  
Shall it pass, and nought to do ?  
Twenty-four hours will make a day,  
Too much time to spend in sleep ;  
Too much time to spend in play,  
For seven days will end the week.  
Fifty and two such weeks will put  
Near an end to every year ;  
Days three hundred sixty-five,  
Are the whole that it can share.  
Except in leap year, when one day  
Added is to gain lost time ;  
May it not be spent in play,  
Neither any evil crime.  
Our time is short we often say :  
Let us then improve it well ;  
That eternally we may  
Live where happy angels dwell.

---

#### MARCHING RHYME.

Come, little children, march away,  
And let us all be blythe and gay,  
And whether we're at work or play,  
Attentive be and gentle.

And surely we will all attend,  
We know our mistress is our friend,  
And does her best assistance lend,  
    To make us all good humour'd.

Come now and take our places,  
Whilst with smiling faces,  
We will keep our hands behind,  
    And all our lessons try to mind.

---

O HOW PRETTY IT IS TO SEE !

O how pretty it is to see  
Little children all agree,  
And try to keep the step with me,  
    While they are exercising.  
Right foot, left foot, hands behind,  
Be unto each other kind,  
Always bear this rule in mind,  
    When we're exercising.  
Now clap your hands, and stamp your feet,  
Good humour makes our lessons sweet,  
And when we've done we'll take our seat,  
    After our exercising.

---

DIRTY JEM.

There was one little Jem,  
'Twas reported of him,  
And 'twill be to his lasting disgrace ;  
    That he never was seen  
    With his hands at all clean,  
Nor ever yet wash'd was his face.  
    His friends were much hurt,  
    To see so much dirt,  
And often they made him quite clean ;  
    But all was in vain,  
    He was dirty again,  
And never was fit to be seen.

When to wash he was sent,  
He unwillingly went,  
With water he'd splash himself o'er ;  
But he seldom was seen  
To have wash'd himself clean,  
And often look'd worse than before.

The idle and bad,  
Like this little lad,  
May be dirty and black to be sure :  
But good boys are seen  
To be decent and clean,  
Although they are ever so poor.

---

## THE CAT.

I like little pussy, her coat is so warm,  
And if I don't hurt her, she'll do me no harm ;  
So I'll not pull her tail, nor drive her away,  
But pussy and I very gently will play.  
She shall sit by my side, and I'll give her some food,  
And she'll love me because I am gentle and good.

---

## THE LITTLE FLY.

'Twas God that made that little fly,  
And if I pinch it, it will die ;  
For teacher tells me, God has said,  
I must not hurt what he has made ;  
For He is very kind and good,  
Gives even little flies their food ;  
And He loves every little child,  
Who is kind-hearted, meek, and mild.

---

## KINDNESS TO HORSES AND DONKEYS.

How very sad it is sometimes to meet,  
Those naughty men and boys, about the street,  
Who strike their horses, and their donkeys too,  
And call them wicked names, to make them go.

Poor patient animals ! how mute they stand,  
 And let me pat them with my little hand ;  
 I could not bear to hurt or use them ill,  
 And when I am a man, I never will.

For they can feel as well as we, you know,  
 And therefore we should never treat them so ;  
 Because I should not like myself to be  
 Half-starved, and kick'd, and lash'd so cruelly.

Then useful horses carry heavy loads,  
 And draw the carts of stones to mend the roads ;  
 Therefore I'm sure it must be very wrong  
 To hurt them, after working all day long.

But people should be always kind and good,  
 And give them plenty of good wholesome food,  
 And keep them in a nice warm shed or stall,  
 And scarcely whip the poor dumb things at all.

The patient Ox his owner knows,  
 The Ass his master's stall,  
 But Man, who every blessing owes  
 To God—forgets them all !

---

#### ABOUT THROWING STONES.

Would you learn, my little children,  
 To be very good and kind ;  
 What I tell you, pray remember ;  
 What I teach you, always mind.

In your play be very careful,  
 Not to give another pain ;  
 If rude children tease or hurt you,  
 Never do the same again.

If a stone was thrown against you,  
 And should hit your head or eye,  
 Don't you know 'twould hurt you sadly ?  
 Don't you think 'twould make you cry ?

Never throw a stone or brick then,  
 Though you see no creature near :

'Tis a dangerous naughty practice,  
Which my little ones should fear.

Never do like those bad children,  
Who are often in the street,  
Throwing stones at dogs or horses,  
Or at any thing they meet.

God will love the child that's gentle,  
And that tries to do no wrong ;  
Think of this, my dearest children,  
Even though you are so young.

Question the children on the above, and endeavour strongly to impress upon their minds, the various evils resulting from throwing stones.

---

MECHANICAL LESSONS, WITH APPROPRIATE ACTION.

This is the way they strike a light, they  
strike a light, they strike a light ;  
This is the way they strike a light with flint,  
and steel, and tinder.

This is the way we wash our face, &c., to  
come to school in the morning.

This is the way we show our hands, &c.,  
whether they are clean or dirty.

It is a shame to come to school, &c., with  
dirty hands or faces.

Clean children like to come to school, &c.,  
but not with dirty faces.

This is the way the sawyers work, &c., to cut  
the wood in pieces.

This is the way they cut the stones, &c., to  
fit them for the building.

This is the way we tie our shoes, &c., always  
when they want it.

This is the way we milk the cow, &c., to  
get our milk for breakfast.

This is the way they mow the grass, &c., to  
make the hay for the horses.

---

## ON AGRICULTURE.

This is the way we spread manure,  
When lands are much in need ;  
This is the way we plough the ground,  
Before we sow the seed.

This is the way we sow the seed,  
Which every child should know ;  
This is the way we harrow the ground,  
And cover the seed to grow.

This is the way we scare the crows,  
That come to pick the seed ;  
This is the way we hoe the ground,  
To clear out every weed.

This is the way we reap the corn,  
When harvest time is come ;  
This is the way we bind the corn  
In sheaves to carry home.

This is the way we thrash the corn,  
On winter's coldest day ;  
This is the way we fan the corn,  
To blow the chaff away.

This is the way we grind the corn,  
Into fine flower so sweet ;  
This is the way we knead the dough,  
And so make bread to eat.

T. BILBY.

---

SOWING THE CORN.

This is the way we sow the corn,  
We sow the corn, we sow the corn,  
This is the way we sow the corn.  
November and December.



This is the way we reap the corn,  
 We reap the corn, we reap the corn ;  
 This is the way we reap the corn,  
 In the month of August.

This is the way we thrash the corn,  
 We thrash the corn, we thrash the corn ;  
 This is the way we thrash the corn,  
 Ready to send to the mill.

This is the way the mill goes round,  
 The mill goes round, the mill goes round ;  
 This is the way the mill goes round,  
 When it's grinding the flour.

*These ten rhymes are selected from " Hints for the Formation of Infant Schools."*

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The following rhymes on science are selected, with his permission, from a yet unpublished manuscript of Mr Milne of the Edinburgh Infant School :—

### *Philosophical Songs.*

#### THE MECHANICAL POWERS.

TUNE—" *Ye Banks and Braes.*"

The moving power of simplest kind,  
 Is said to be the plane inclined ;  
 On which all heavy bodies tend,  
 If not prevented, to descend.

The wedge is very simple too,  
 Yet many wondrous things can do ;  
 Such as from hard and solid rock,  
 Detach a large and massy block.

The lever often is applied  
 To move with ease to either side,  
 A mass which by mere strength alone,  
 Could not by many hands be done.

The pulley an enormous weight  
Will raise to a surprising height,  
Or rapidly extend the sail  
To catch the favouring breeze or gale.

The axis and its powerful wheel  
Makes things a regular impulse feel ;  
And therefore much employed has been  
In both the small and great machine.

The screw, though call'd a force compound,  
Is also very useful found,  
For speedily it can apply  
A pressure that would tons defy.

---

#### THE ORGANS OF THE SENSES.

The organ of the sense of sight,  
The little tender eye,  
Is suited well to bear the light  
That streams along the sky.

The organ, curiously design'd,  
By which it is we hear,  
Which catches modulated wind,  
Is simply call'd the ear.

The organ of the sense of smell  
Resides within the nose ;  
To which, unfelt, invisible,  
The spreading odour flows.

The organs of the sense of taste,  
Which relishes excite,  
Are in the tongue and palate placed,  
To judge if food is right.

The organs of the sense of touch,  
The fingers chiefly are ;  
But every where the nerves are such,  
We feel the slightest scar.

## THE CIRCULATION OF THE BLOOD.

TUNE—"Of a' the Airts."

The bright red blood, in healthy state,  
Is driven by the heart,  
Through arteries to circulate  
To the remotest part.

Thus nourishment, the blood contains  
Is in our system laid ;  
The rest is gather'd by the veins,  
And to the heart convey'd.

The blood now of a purple hue,  
Requires a thorough change,  
Before that it again should through  
Our bodies freely range.

And therefore to the lungs it flows,  
For alteration there,  
And this it quickly undergoes,  
By contact with the air.

Thus purified, it enters in  
The other side the heart,  
Anew its journey to begin,  
And life and health impart.

## THE DENOMINATIONS OF LAND.

TUNE—"Lonesdale."

The surface of the globe,  
By some is said to be  
One-third the dry and solid land,  
Two-thirds the dark blue sea.

A portion of the land,  
Of very great extent,  
Unbroken by the rolling sea,  
We call a Continent.

A space the ocean bounds,  
 Save at a narrow spot,  
 This name, descriptive of its state,  
 Peninsula has got.

An Isle or Island is  
 The name by us applied  
 To land which seas or oceans deep  
 Surround on every side.

And we an Isthmus call  
 That narrow spot or neck,  
 Which thus doth mighty bays or seas  
 Completely intersect.

A promontory, cape,  
 Or headland, bold jut out  
 Afar into the sea, and makes  
 The seaman sail about.

## DENOMINATIONS OF WATER.

TUNE—"Lonesdale."

The vast expansive deep,  
 Is ocean named aright ;  
 There we may sail for many days,  
 And land still out of sight.

A sea, though also vast,  
 And green and briny too,  
 Has shingle sand, or rocky coasts,  
 Much nearer us in view.

An outlet from a sea,  
 Into the ocean great,  
 Narrow'd by land on either side.  
 Is often call'd a strait.

A passage where the tide  
 Without obstruction flows,  
 Though long and narrow, by the name  
 Of channel often goes.

When many rivers meet,  
As in the sea they fall,  
An estuary, sound, or firth,  
The swelling tide we call.  
A bay is where the sea  
Breaks in upon the land ;  
A gulf is more extensive still,  
And deep, we understand.  
A haven or a creek  
Are bays of smaller size,  
Where ships may proper shelter seek  
When violent storms arise.  
When hills on every side  
A sheet of water make,  
Or large, or small, or salt, or fresh,  
We say it is a lake.

---

## THE OCEANS.

The oceans number five ;  
Two lie around the poles,  
Between us and America ;  
A third th' Atlantic rolls.  
The Indian Ocean next,  
A fourth is said to be ;  
The fifth the great Pacific is,  
From tempests ever free.

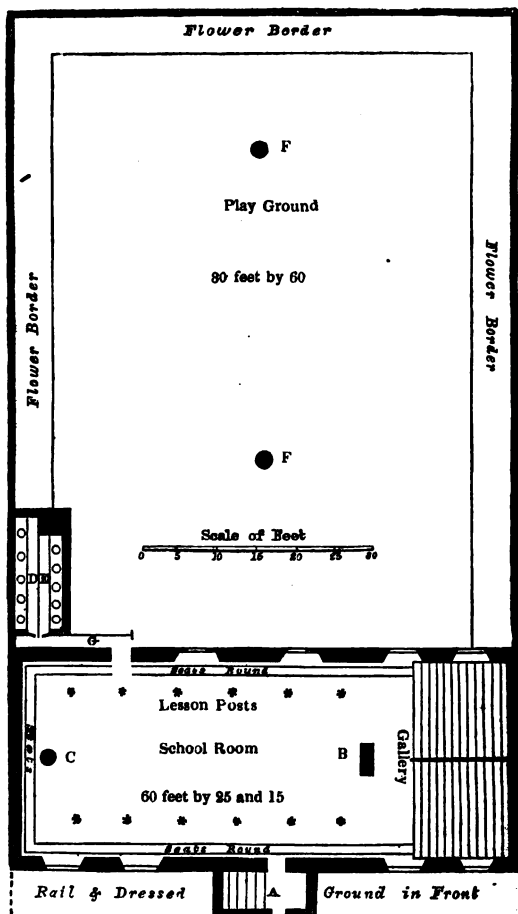
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## THE STREAMS.

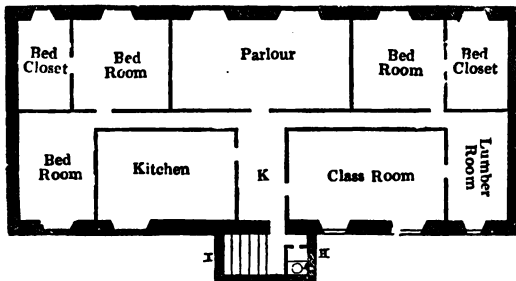
The rain descending from the hills,  
Or melting mass of snow,  
Creates a multitude of rills,  
That ripple down below :  
By rills uniting are begun  
Burns, rivulets, or brooks,  
Which round about the mountains run,  
And through the valley's crooks.

Then craggy rocks they tumble o'er,  
Which we a cascade call,  
Or cataract, with furious roar,  
Or linn, or waterfall.  
Their limpid streams, proceeding thence,  
Through straths their courses wend ;  
Until in some great confluence,  
Their meeting currents blend.  
Thus rivers into seas, or firths,  
Or estuaries spread,  
And far from where they had their source,  
Flow to the ocean's bed.

## No. I.



## No. II.

*Teacher's House, and Class-Room over School.**References to both Cuts.*

- A The Porch and Lobby, with stair to the story above.
- B The moveable Rostrum.
- C The Stove.
- D Girls' Water Closet, with door-screen.
- E Boys' ditto, with retiring-place at inner end, and door-screens.
- G Covered way to Water Closets.
- FF Gymnastic Swing Posts.
- H House Water Closet at top of stair.
- I Stair from A in floor below.
- K Lobby leading to Passage, with a light above at Parlour door.

THE END.



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